逻辑器件指南

www.ti.com/logic

2009年第3季度

德州仪器 中国产品信息中心

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引言

作为逻辑器件的全球领导者，德州仪器 (TI) 提供了门类齐全的逻辑功能器件和技术，从成熟的双极和双极互补金属氧化物半导体 (BiCMOS) 系列到最新的先进CMOS系列一应俱全。TI可提供当今电子市场所需的逻辑性能和特点的工艺技术，同时一如既往地对传统逻辑产品提供支持。

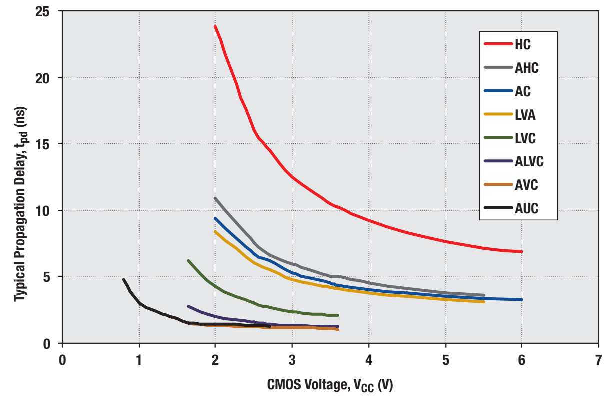
TI的产品库包括以下工艺技术或器件系列：

- AC、ACT、AHC、AHCT、ALVC、AUC、AUP、AVC、FCT、HC、HCT、LV-A、LV-AT、LVC、TVC
- ABT、ABTE、ALB、ALVT、BCT、HSTL、LVT
- BTA、CB3Q、CB3T、CBT、CBT-C、CBTLV、FB、FIFO、GTL、GTLP、JATG、I_2C、VME
- ALS、AS、F、LS、S、TTL

有些逻辑器件系列已经供应市场多年，其中最老的产品进入市场早已超过30年。“逻辑器件演进概览”部分为逻辑器件用户提供了一种从旧技术逐步过渡到新技术的直观指导。

当今应用的发展趋势是功能的日益增加和尺寸的不断缩减。TI的目标是帮助设计师轻松找到他们所需要的理想逻辑器件技术或功能元件。通过在每个价格/性能节点上提供逻辑器件系列，再加上堪称业界标杆的交货、可靠性及全球性支持，TI信守了所做的承诺，即：凭借最先进和成熟的逻辑产品线来继续保持自身的市场地位。“产品索引”部分按照功能与技术的关系简要地罗列了TI规模庞大的产品库。“功能交叉参考”部分按照器件（型号）与技术的关系给出了产品库一览表。

图 1：CMOS电压与速度的关系曲线



采用500 Ω/30pF负载时16245的运行状况比较。

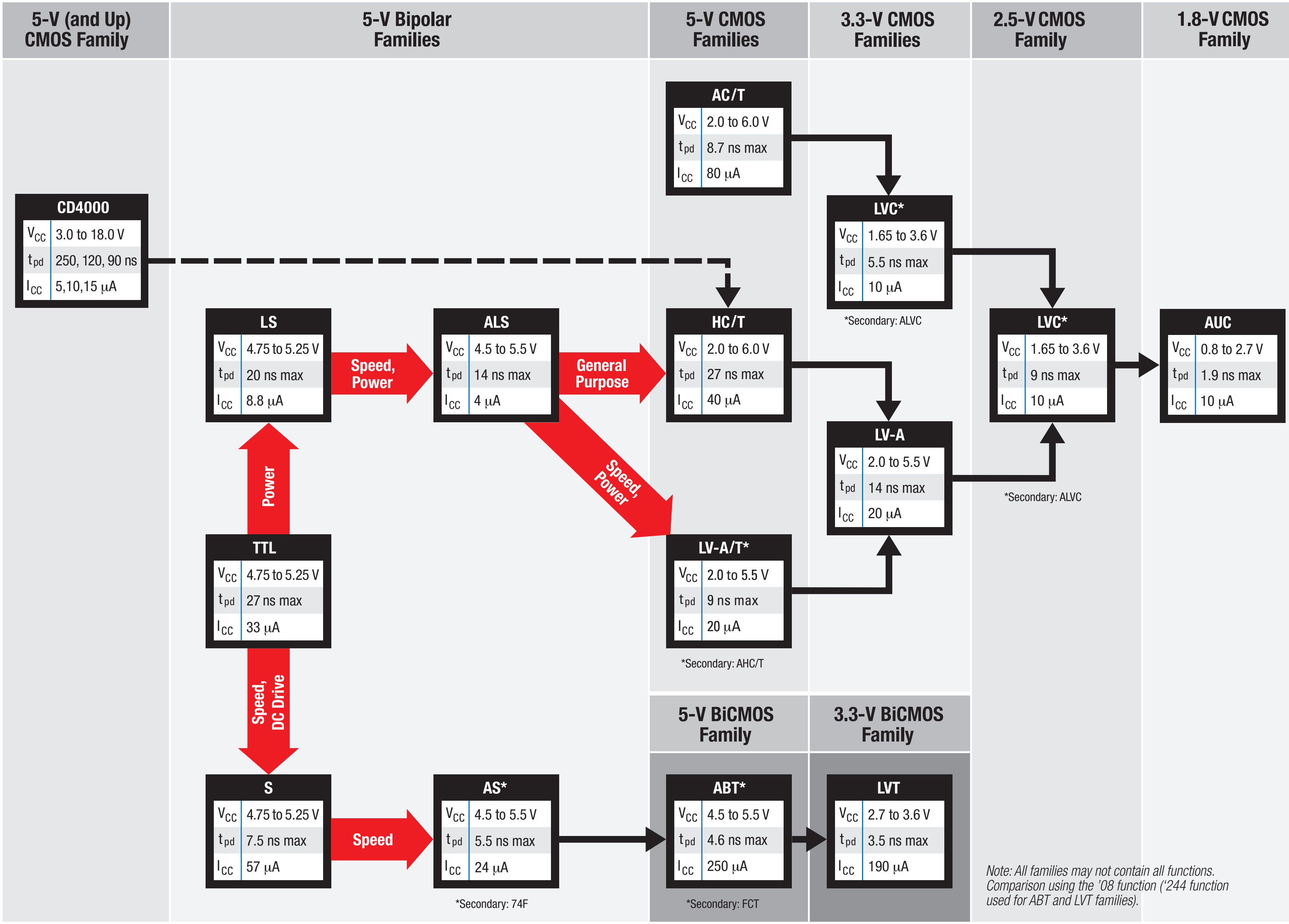
从历史上看，在产品系列改进方面，逻辑器件供应商一直着重优先考虑速度和低功率。如图1所示，诸如AUC (1.8V)、ALVC (3.3V) 和LV-A (5V) 等许多新型TI产品技术均提供了快速性能，所采用的工艺技术取决于工作电压要求。其他技术（比如AUP）则专注于提供“同类最佳”的低功率性能。

“封装和标示信息”部分说明了TI提供的众多封装选项。包括先进的表面贴装型封装，例如：细间距、小外形球栅阵列 (BGA) 封装、用于门和八通道器件的方形扁平无引线 (QFN) 封装以及用于单门、双门和三门功能元件的WCSP (NanoFree™) 封装。

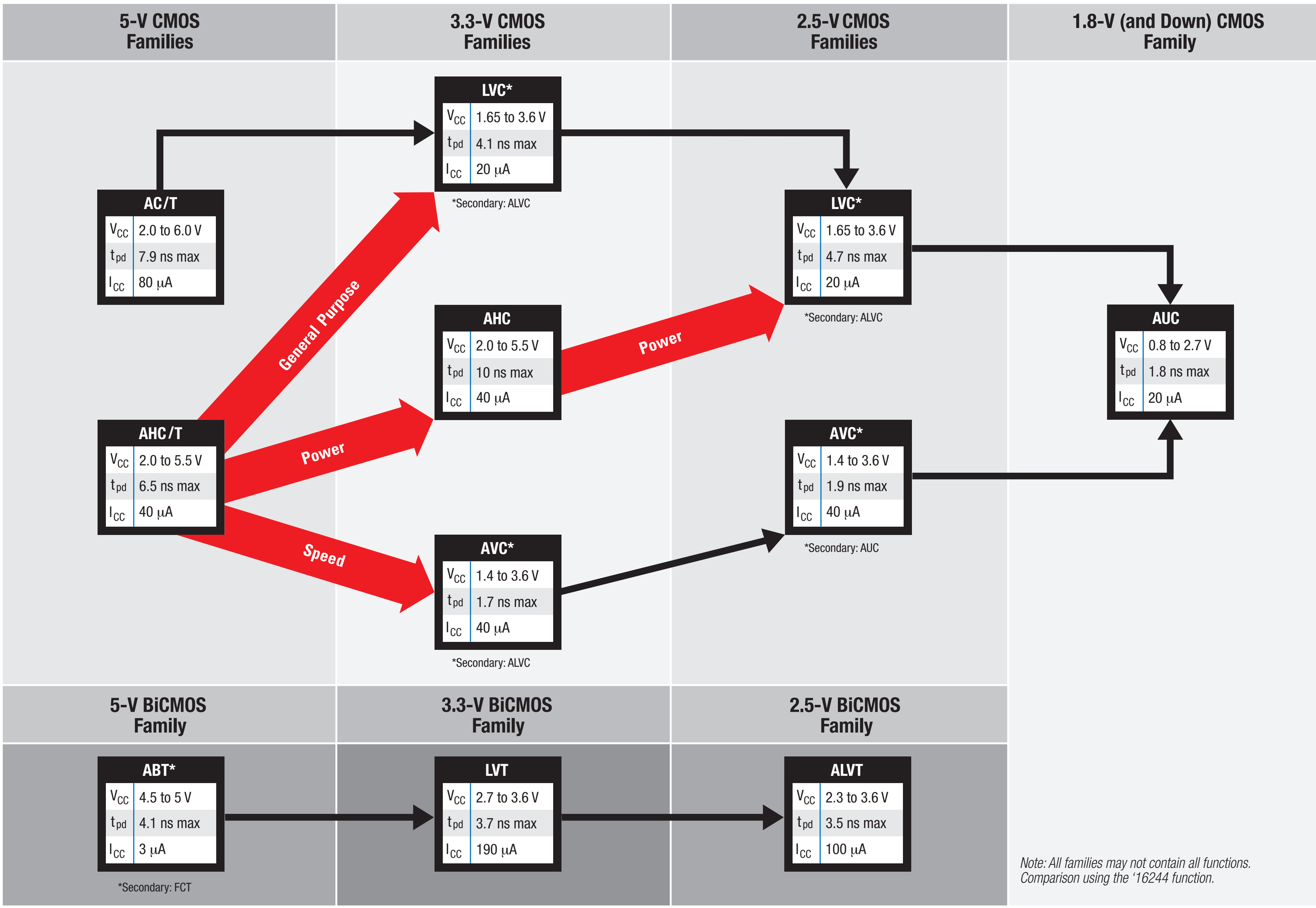
“资源”部分提供了有关TI逻辑器件系列的额外信息，包括一份技术文献清单和大多数逻辑器件系列的替代货源概况。

数据表可以从TI的网站下载，网址是：www.ti.com.cn，也可通过您当地的销售办事处或TI授权分销商（见封底）来订购。

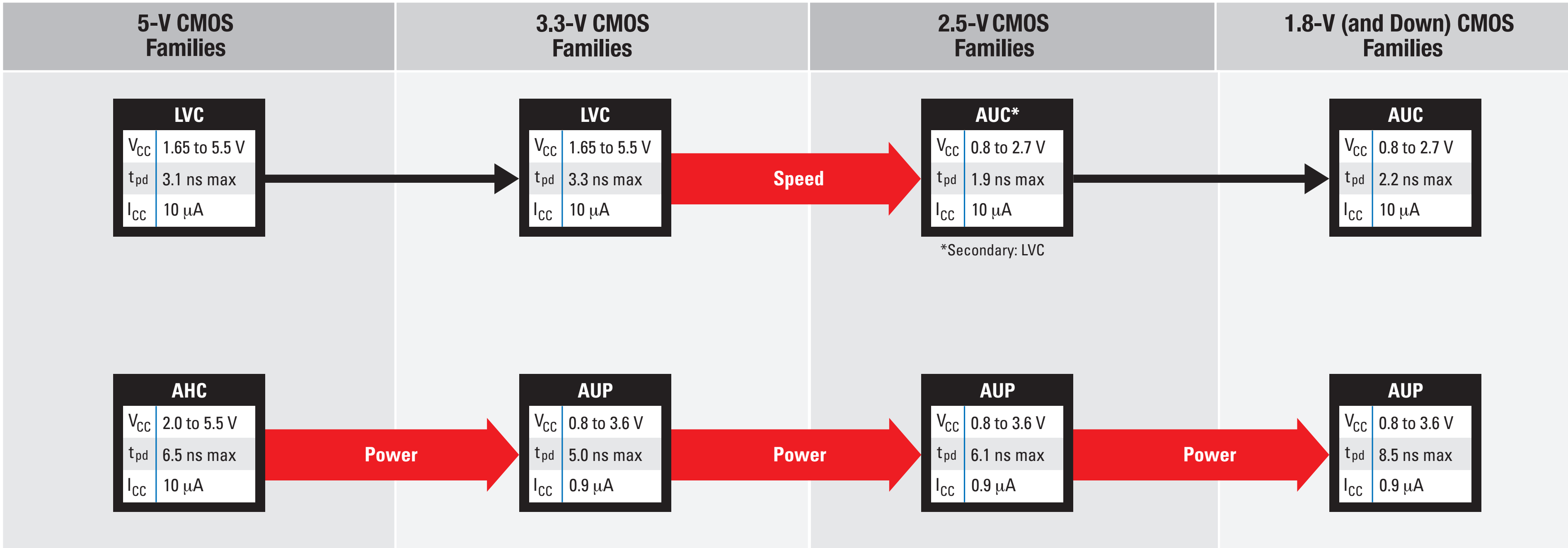
门和八通道器件


5-V (and Up) CMOS Family
5-V Bipolar Families
5-V CMOS Families
3.3-V CMOS Families
2.5-V CMOS Family
1.8-V CMOS Family
AC/T
V_{CC} 2.0 to 6.0 V
t_{pd} 8.7 ns max
I_{CC} 80 µA
CD4000
V_{CC} 3.0 to 18.0 V
t_{pd} 250, 120, 90 ns
I_{CC} 5,10,15 µA
LVC*
V_{CC} 1.65 to 3.6 V
t_{pd} 5.5 ns max
I_{CC} 10 µA
*Secondary: ALVC
LS
V_{CC} 4.75 to 5.25 V
t_{pd} 20 ns max
I_{CC} 8.8 µA
Speed, Power
ALS
V_{CC} 4.5 to 5.5 V
t_{pd} 14 ns max
I_{CC} 4 µA
General Purpose
HC/T
V_{CC} 2.0 to 6.0 V
t_{pd} 27 ns max
I_{CC} 40 µA
LVC*
V_{CC} 1.65 to 3.6 V
t_{pd} 9 ns max
I_{CC} 10 µA
AUC
V_{CC} 0.8 to 2.7 V
t_{pd} 1.9 ns max
I_{CC} 10 µA
Power
Speed, Power
LV-A
V_{CC} 2.0 to 5.5 V
t_{pd} 14 ns max
I_{CC} 20 µA
*Secondary: ALVC
TTL
V_{CC} 4.75 to 5.25 V
t_{pd} 27 ns max
I_{CC} 33 µA
LV-A/T*
V_{CC} 2.0 to 5.5 V
t_{pd} 9 ns max
I_{CC} 20 µA
*Secondary: AHC/T
Speed, DC Drive
5-V BiCMOS Family
3.3-V BiCMOS Family
S
V_{CC} 4.75 to 5.25 V
t_{pd} 7.5 ns max
I_{CC} 57 µA
Speed
AS*
V_{CC} 4.5 to 5.5 V
t_{pd} 5.5 ns max
I_{CC} 24 µA
*Secondary: 74F
ABT*
V_{CC} 4.5 to 5.5 V
t_{pd} 4.6 ns max
I_{CC} 250 µA
*Secondary: FCT
LVT
V_{CC} 2.7 to 3.6 V
t_{pd} 3.5 ns max
I_{CC} 190 µA
Note: All families may not contain all functions. Comparison using the '08 function ('244 function used for ABT and LVT families).

Widebus和Widebus+

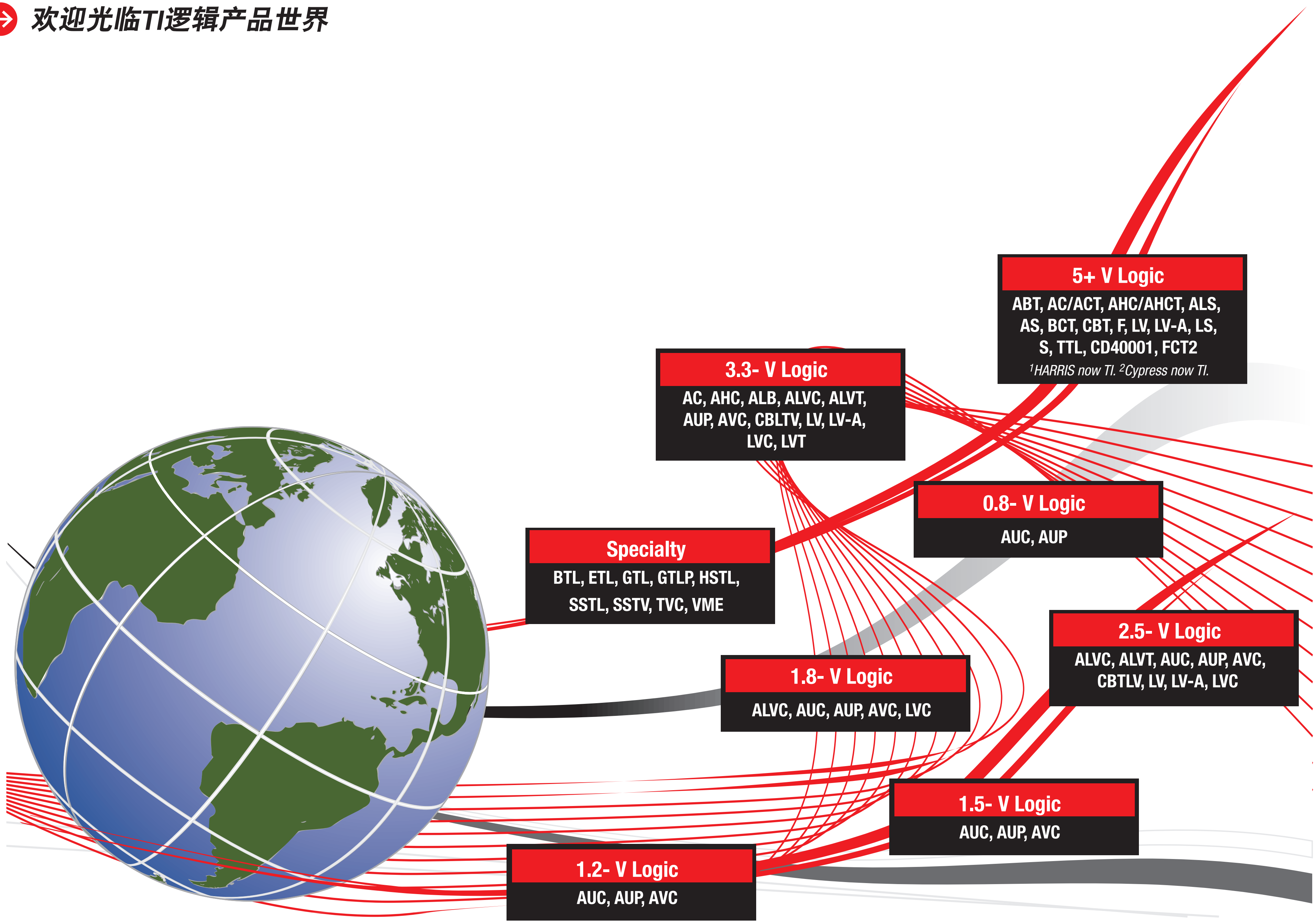


小尺寸逻辑器件



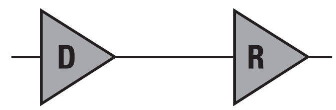
Note: All families may not contain all functions.
Comparison using the '1G04 function.

欢迎光临TI逻辑产品世界



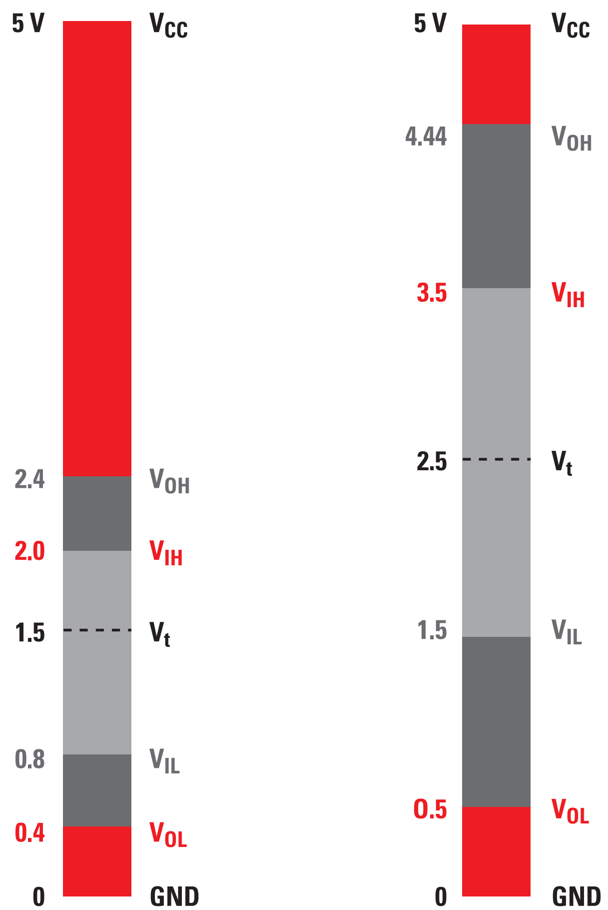
IC基础知识：开关标准的比较

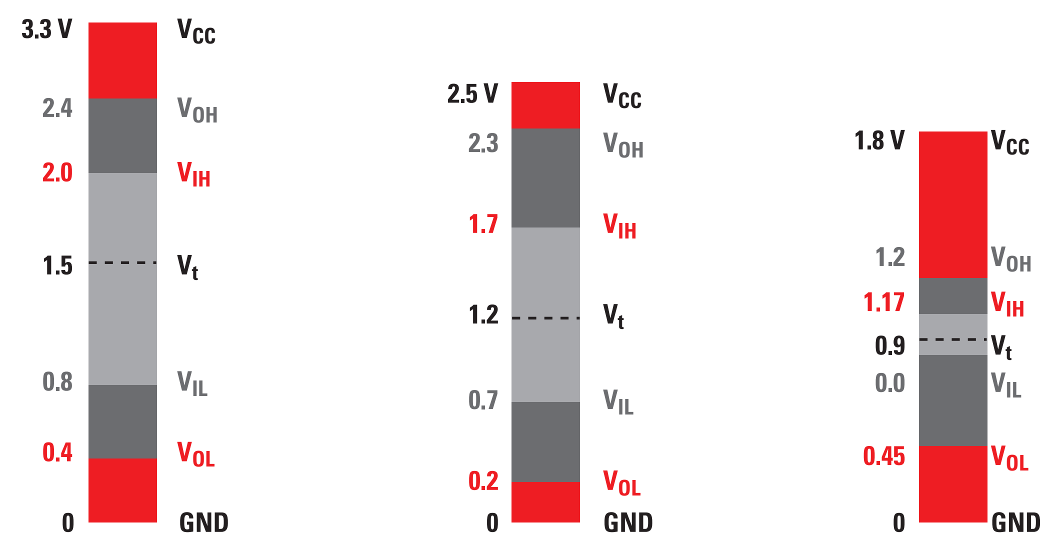
Is V_{OH} higher than V_{IH}?
Is V_{OL} less than V_{IL}?



R / D	5 TTL	5 CMOS	3 LVTTL	2.5 CMOS	1.8 CMOS
5 TTL	Yes	No	Yes*	Yes*	Yes*
5 CMOS	Yes	Yes	Yes*	Yes*	Yes*
3 LVTTL	Yes	No	Yes	Yes*	Yes*
2.5 CMOS	Yes	No	Yes	Yes	Yes*
1.8 CMOS	No	No	No	No	Yes*

* Requires V_{IH} Tolerance





5-V TTL
Standard TTL: ABT, AHCT, HCT, ACT, bipolar

5-V CMOS
Rail-to-Rail 5 V
HC, AHC, AC, LV-A

3.3-V LVTTL
LVT, LVC, ALVC
AUP, LV-A, ALVT

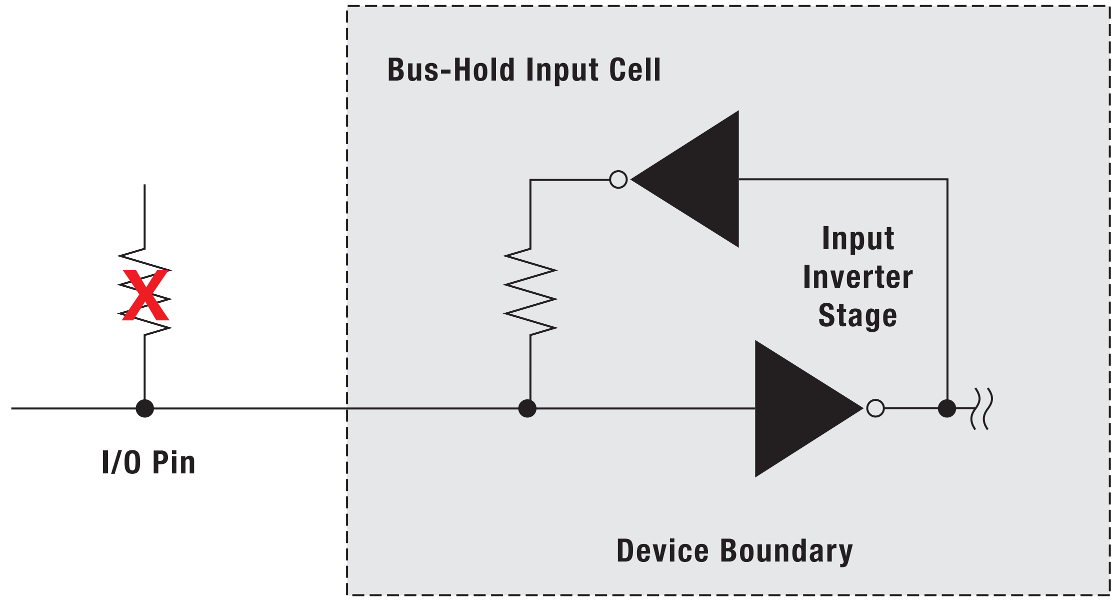
2.5-V CMOS
AUC, AUP, AVC,
ALVC, LVC, ALVT

1.8-V CMOS
AUC, AUP, AVC,
ALVC, LVC

总线保持输入

主要特点

- 保持输入的最后已知状态——避免使输入悬空
- $I_{i(HOLD)}$或I_{BHL}和I_{BHH}确定了最小保持电流
- 在有效逻辑电平条件下，保持电流并未给驱动输出施加很重的负载
- 免除了在未用或悬空输入/输出引脚上增设外部电阻的需要
- 器件名称中的“H”表示总线保持
- 系统功耗的增加微乎其微
- 总线保持输入单元取代了上拉电阻

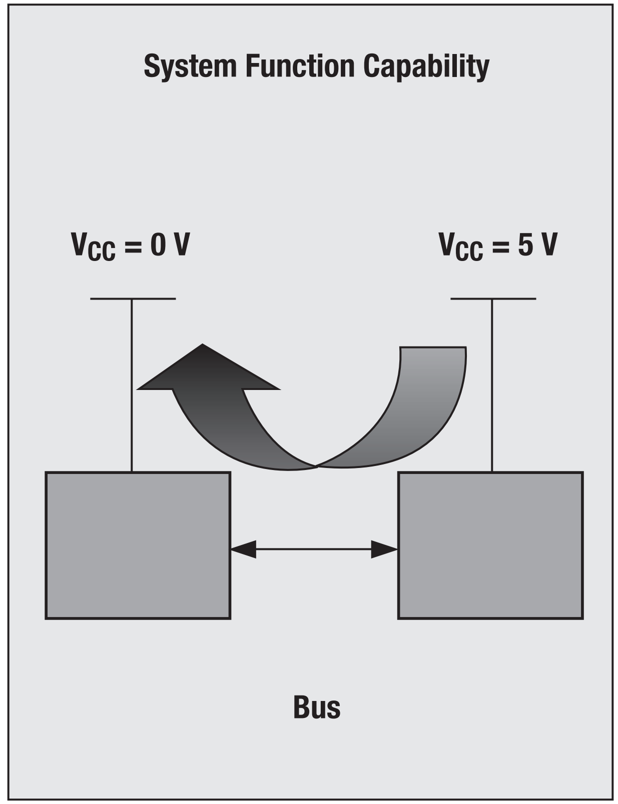


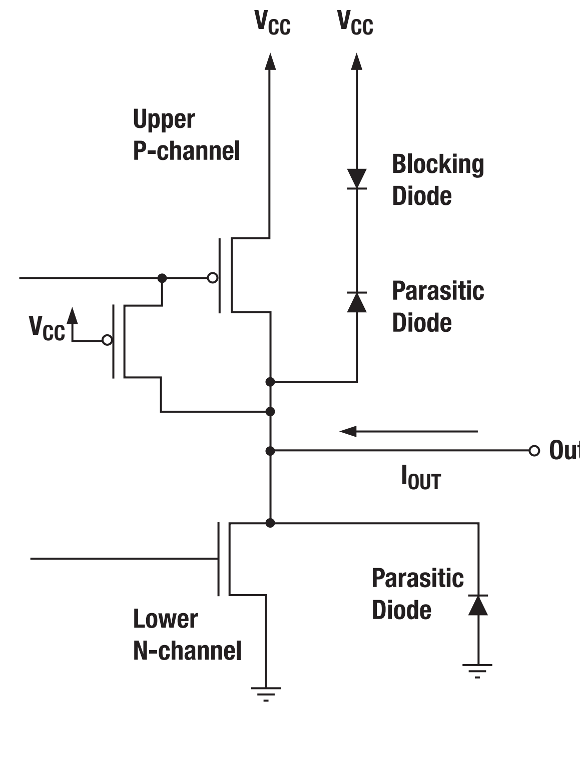
具有总线保持选项的器件系列
ABT、ALVC、ALVT、AVC、AUC、FCT、GTL、GTLP、LVC、LVT、VME

部分断电带电插拔，一级

主要特点

- 可防止在上电或断电期间发生意外的器件动作
- 可防止信号通过寄生二极管供应电流
- 允许对系统内的部分电路实施断电
- 部分断电工作需要I_{off}规格



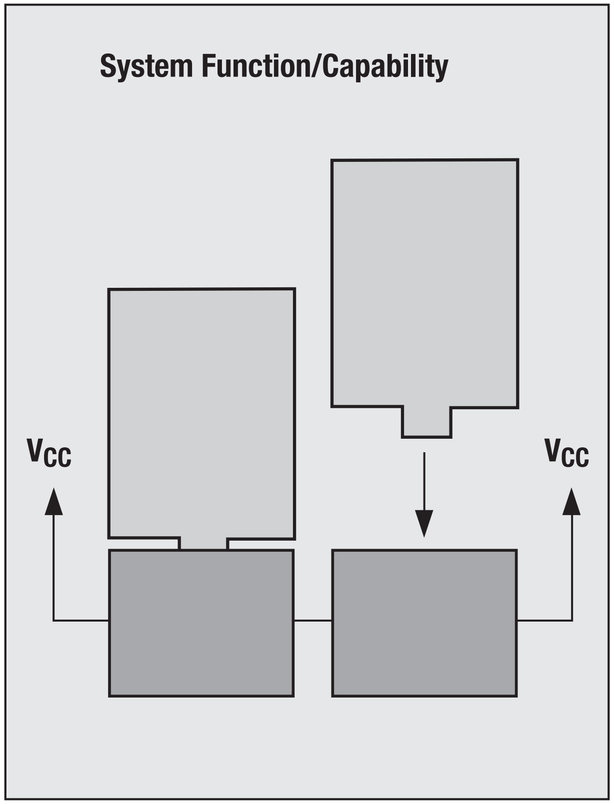


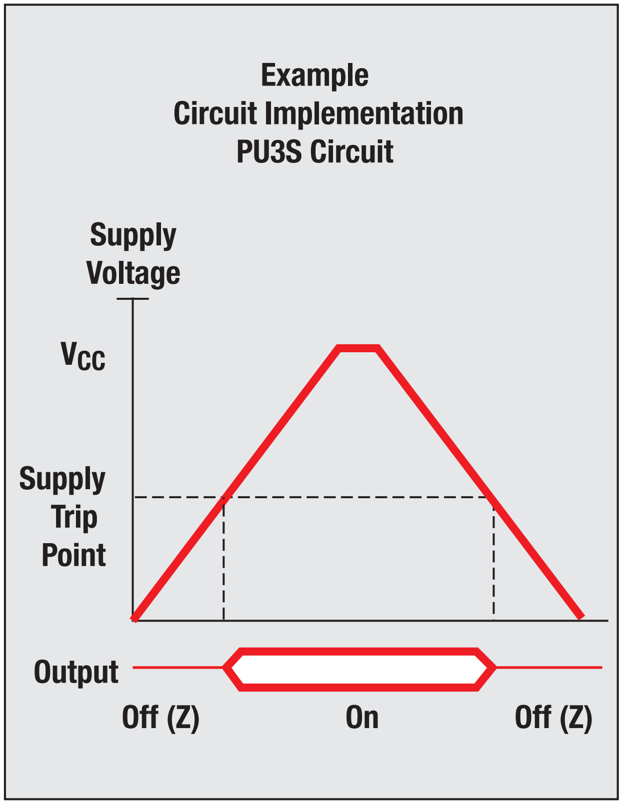
支持部分断电 (I_{off}) 的器件系列
ABT、ALVT、AVC、AUC、AUP、CBTLV、CBT-C、GTL、GTLP、LV-A、LVC、LVT、VME

热插拔，带电插拔，二级

主要特点

- 可防止在V_{CC}跳变点之前出现不需要的输出开通
- 可防止总线在上电时承受重负载
- 允许进行热插拔工作
- 热插拔需要I_{off}和PU3S规格



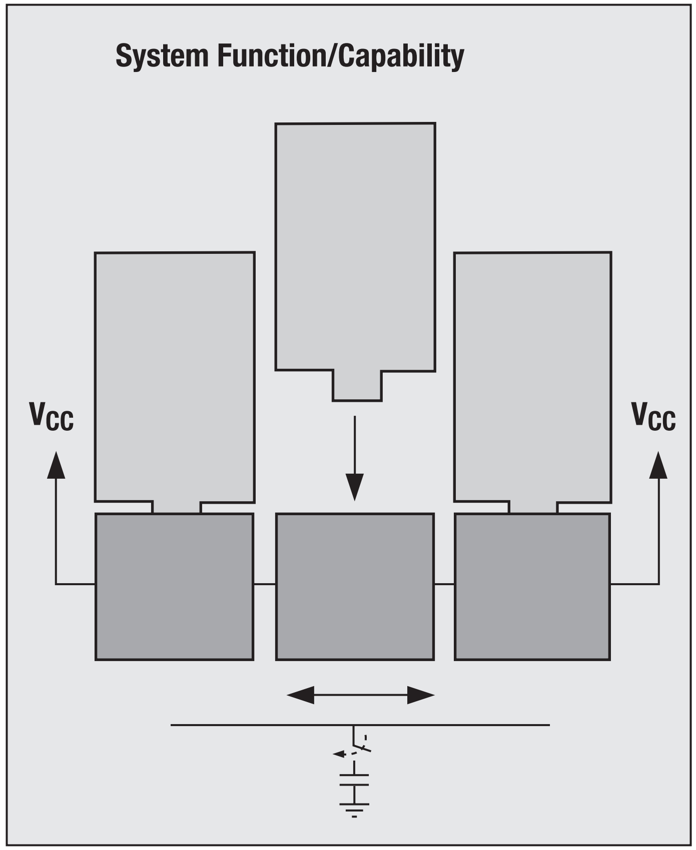


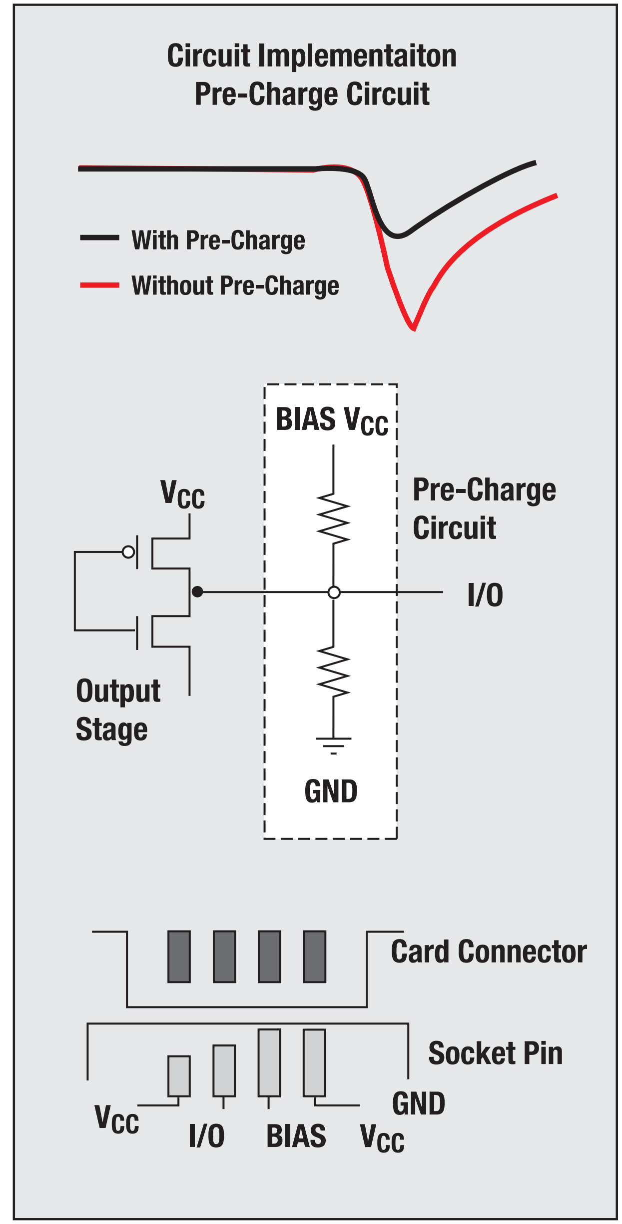
支持热插拔 (I_{off}和上电三态) 的器件系列
ABT、ALVT、GTLP、LVCZ、LVT、VME

带电插拔，三级

主要特点

- 可防止在I/O上发生意外干扰
- 允许进行带电插拔工作
- 带电插拔需要I_{off}、PU3S和BIAS V_{CC}规格
- 预充电功能需要错列引脚





支持带电插拔 (I_{off}、上电三态和BIAS V_{CC}) 的器件系列
GTLP、FB、CBT、CBTLV、VME

AUC，世界首款1.8V逻辑器件

主要特点

- 1.8V优化性能
- V_{CC}规格2.5V、1.8V和1.2V
- 0.8V（典型值）
- 平衡驱动
- 3.6V I/O容限
- 总线保持选项
- 提供了用于部分断电的I_{off}规格
- ESD保护
- 低噪声
- 替代货源协议

先进封装

- **NanoFree™封装**——YZP
- **SOT 23**——DBV (Microgate)
- **SC-70**——DCK (PicoGate)
- **TSSOP**——PW和DGG
- **TVSOP**——DGV
- **LFBGA**——GKE、GKF
- **LFBGA**——ZKE、ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL
- **QFN**——RGY

AUC 1.8V器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74AUC1G00	1.8	–8/8	2.5
SN74AUC16244	1.8	–8/8	2.0

AUP，极低功率逻辑器件

主要特点

- 极低功耗，长电池寿命
- 非常适合于便携式应用
- 卓越的信号完整性
- 输入迟滞（在3.3V时的典型值为250mV）实现了缓慢的输入转换
- V_{CC}：0.8V至3.6V（针对1.8V进行了优化）
- 适合于功率－速度优化的业界最佳产品
- 平衡驱动
- 3.6V I/O容限
- 提供了用于部分断电的I_{off}规格
- ESD保护

先进封装

- **NanoStar™封装**——YZP
- **SOT 23**——DBV (Microgate)
- **SC-70**——DCK (PicoGate)
- **SSOP**——DCT
- **VSSOP**——DCU
- **WCSP**——YFP

AUP低功率逻辑器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74AUP1G08	3.3	–4.0/4.0 (static)	4.3
	1.8	–1.9/1.9 (static)	8.2
	1.2	–1.1/1.1 (static)	15.6

AVLC系列

主要特点

- V_{CC}规格3.3V、2.5V和1.8V
- 平衡驱动
- 总线保持选项
- 驱动能力——12/12mA（在2.5V电压条件下）
- 低噪声
- 阻尼电阻器选项
- ESD保护

先进封装

- **SOIC**——D和DW
- **SSOP**——DB和DL
- **TSSOP**——DB、DCT和DL
- **TVSOP**——DGV
- **LFBGA**——GKE、GKF
- **LFBGA**——ZKE、ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL
- **VSSOP**——DCU
- **UQFN**——DRY
- **SOT**——DRL
- **WCSP**——YZV

文献

- AVLC低电压CMOS逻辑器件数据手册
  文献编号：SCED006

替代货源

- AVLC：NXP、Hitachi、IDT
- VCX：Fairchild、ON、Toshiba

ALVCH总线保持器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74ALVCH24	3.3	–24/24	2.8
SN74ALVCH1624	3.3	–24/24	3.0

AVC系列

主要特点

- V_{CC}规格3.3V、2.5V和1.8V
- 3.3V I/O容限
- 最大T_{pd}低于2.0ns（在2.5V电压条件下）
- 总线保持选项
- 提供了用于部分断电的I_{off}规格
- 动态输出控制（DOC™电路）

先进封装

- **SOIC**——DW
- **TSSOP**——PW、DGG
- **TVSOP**——DGV
- **LFBGA**——GKE、GKF
- **LFBGA**——ZKE、ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL

AVC 1.7ns器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74AVC16244	3.3	–12/12 (static)	1.7
	2.5	–8/8 (static)	1.9
	1.8	–4/4 (static)	3.2

LVC系列

主要特点

- V_{CC}规格3.3V、2.5V和1.8V
- 平衡驱动
- 5V I/O容限
- 总线保持选项
- 串联阻尼电阻器选项
- 提供了用于部分断电的I_{off}规格
- ESD保护
- LVCZ有用于热插拔的上电三态

LVC1G/2G/3G系列

- V_{CC}：1.65V至5.5V
- 支持5V V_{CC}工作
- 输入可接受至5.5V的电压
- I_{off}支持部分断电模式工作

先进封装

- **NanoFree™封装**——YZP
- **SOT 23**——DBV (Microgate)
- **SC-70**——DCK (PicoGate)
- **SOIC**——D和DW
- **SSOP**——DB和DL
- **TSSOP**——PW和DGG
- **TVSOP**——DGV
- **LFBGA**——GKE、GKF
- **LFBGA**——ZKE、ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL
- **QFN**——RGY
- **SSOP**——DCT
- **VSSOP**——DCU
- **UQFN**——DRY
- **SOT**——DRL
- **WCSP**——YZV

文献

- LVC低电压CMOS逻辑器件数据手册
  文献编号：SCBD152
- LVC设计者指南应用报告
  文献编号：SDZAE16

替代货源

- LVC：NXP、Hitachi、IDT
- LCX：Fairchild、Motorola、Toshiba

LVCH总线保持器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74LVCH244	3.3	–24/24	5.9
SN74LVCH16244	3.3	–24/24	4.1

LV-A系列

主要特点

- V_{CC}规格5.0V、3.3V和2.5V
- 平衡驱动
- 5V I/O容限
- 总线保持选项
- 提供了用于部分断电的I_{off}规格
- ESD保护
- 低噪声

先进封装

- **SOIC**——D、DW
- **SOP**——NS
- **SSOP**——DB
- **TSSOP**——PW、DGG
- **TVSOP**——DGV
- **QFN**——RGY、RGQ

文献

- LV低电压CMOS逻辑器件数据手册
  文献编号：SCBD152

替代货源

- LV：Philips、Hitachi
- LVQ：Fairchild、ON、Toshiba
- LVX：Fairchild、ON

LV-A系列

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74LV244A	5.0	–16/16	6.5
	3.3	–8/8	10.0

LVT系列

主要特点

- V_{CC}规格3.3V
- 高驱动输出：高达64mA
- 5V I/O容限
- 总线保持选项
- 可实现部分断电 (I_{off})
- 上电三态 (I_{OZPU}、I_{OZPD})
- 热插拔（I_{off}和PU3S）
- 低噪声
- 阻尼电阻器选项

先进封装

- **SOIC**——DW
- **SSOP**——DB和DL
- **TSSOP**——PW和DGG
- **TVSOP**——DGV
- **LFBGA**——GKE、GKF
- **LFBGA**——ZKE、ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL

文献

- LVT低电压技术数据手册
  文献编号：SCBD154
- LVT至LVTH转换应用报告
  公布在互联网上

替代货源

- LVT：Philips、Hitachi、Fairchild*、ON*

**类似器件：没有第二货源协议*

LVTH总线保持器件

Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74LVTH244	3.3	–32/64	3.5
SN74LVTH16244	3.3	–32/64	3.2

ALVT系列

主要特点

- V_{CC}规格3.3V和2.5V
- 高驱动输出：高达64mA
- 5V I/O容限
- 上电三态 (I_{OZPU}、I_{OZPD})
- 可实现部分断电 (I_{off})
- 热插拔（I_{off}和PU3S）
- 总线保持

先进封装

- **SSOP**——DL
- **TSSOP**——DGG
- **TVSOP**——DGV
- **LFBGA**——GKE和GKF
- **LFBGA**——ZKE和ZKF
- **VFBGA**——GQL
- **VFBGA**——ZQL

文献

- ALVT低电压技术数据手册
  文献编号：SCED003

第二货源

- ALVT：Philips

ALVTH总线保持器件

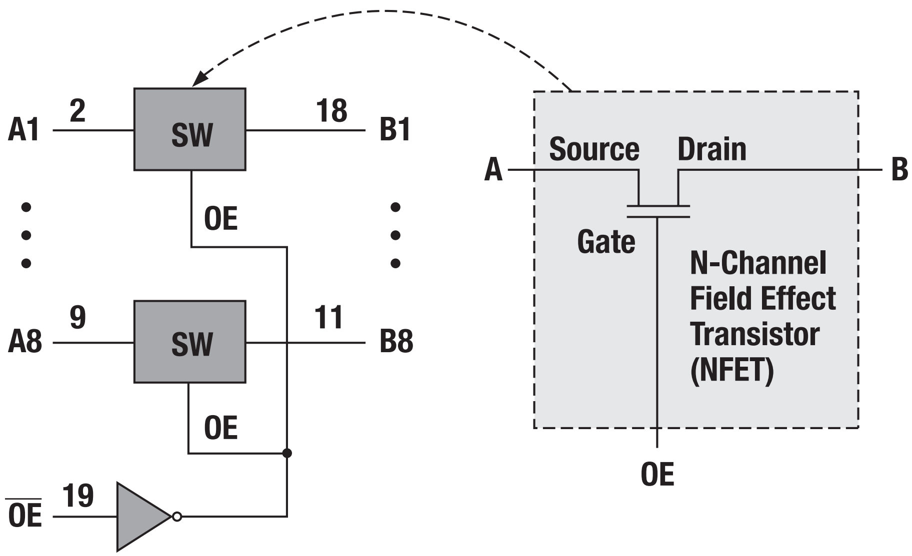
Device	V_{CC} (V)	Drive (mA)	$T_{PD(MAX)}$ (ns)
SN74ALVTH16244	3.3	–32/64	2.4
	2.5	–8/24	3.0

数字总线开关：CBT

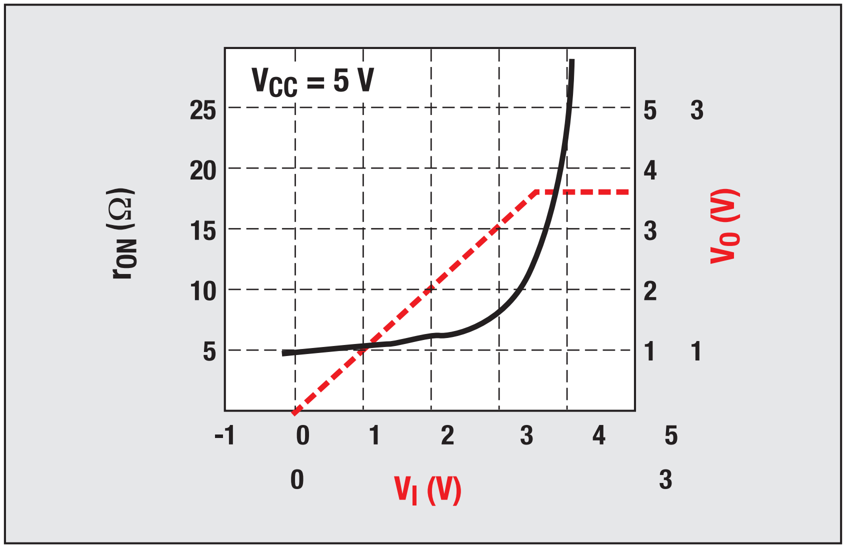
CBT：5V通用型总线开关系列

- NMOS开关采用NFET
- 支持5V工作（V_{CC} = 4V至5.5V）
- 当把正信号施加在栅极上时开关开通（/OE为低电平）
- 当把低电平信号施加在栅极上时开关关断（/OE为高电平）
- 双向工作（源极和漏极可互换）
- CBTD = 可利用电平移位二极管将NMOS开关配置为电平移位器
- CBTR有用于改善噪声控制的串联阻尼电阻器

CBT3245 Logic Diagram



CBT V_{IN}/V_{OUT} Graph

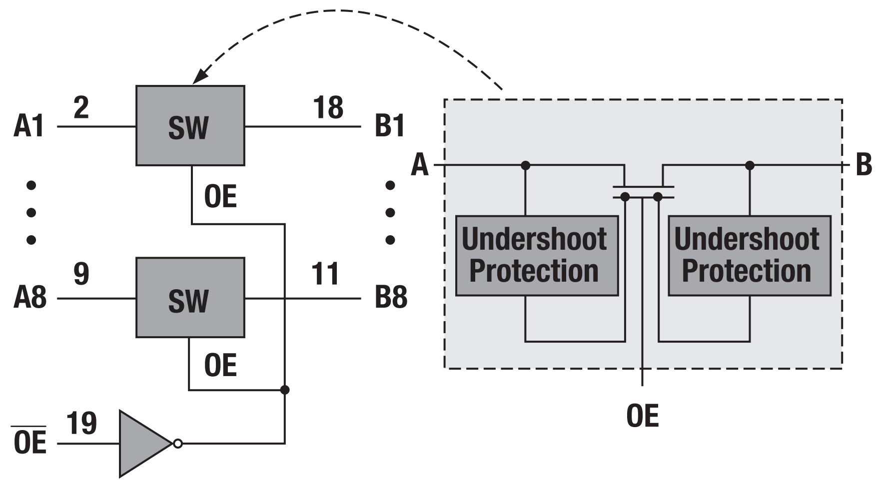


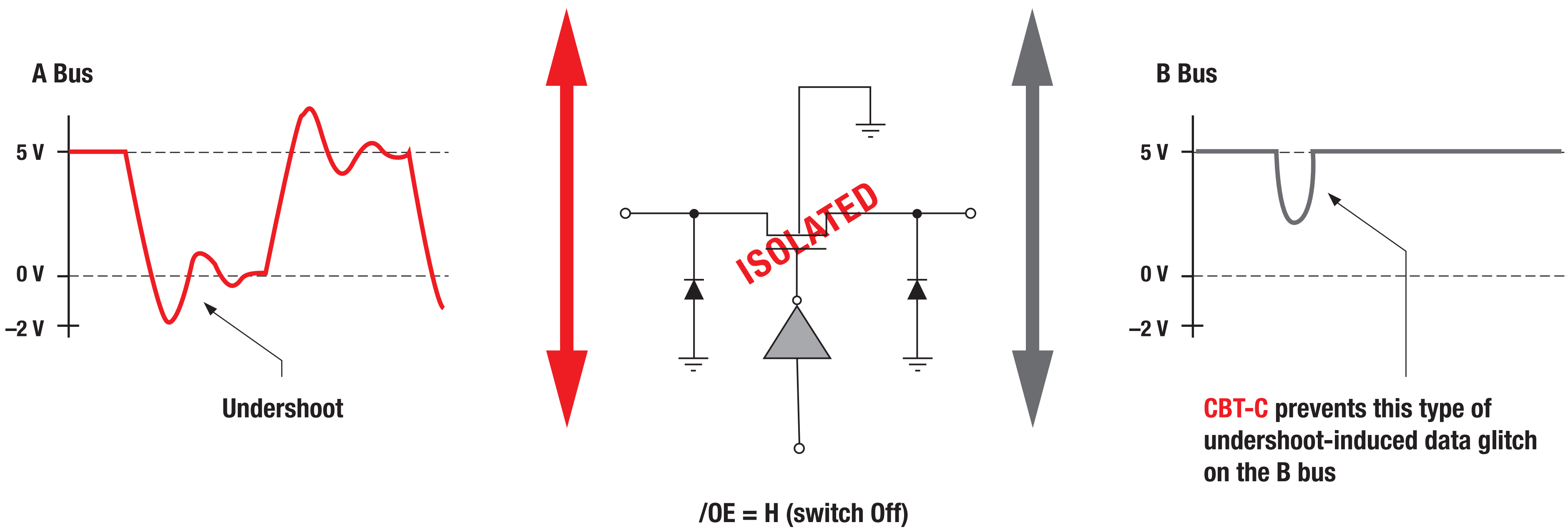
数字总线开关：CBT-C

CBT-C：改进型5V通用总线开关系列

- 有源下冲保护电路提供了低至-2V的保护能力
- I_{off}支持部分断电模式工作
- 与CBT系列相比性能有所增强（更快的Ten/Tdis，更低的r_{on}）
- 改进型ESD保护：2kV HBM；1kV CDM

CBT3245 Logic Diagram



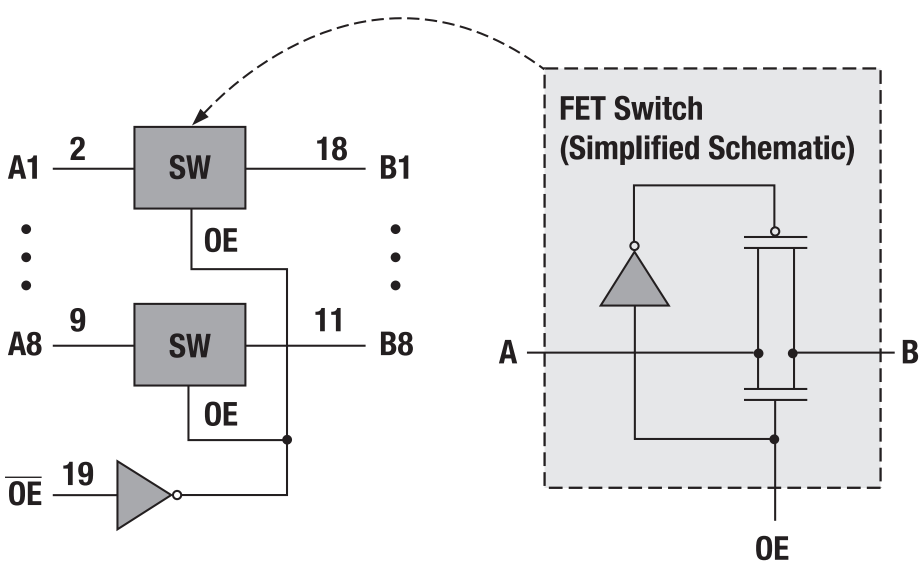


数字总线开关：CBTLV

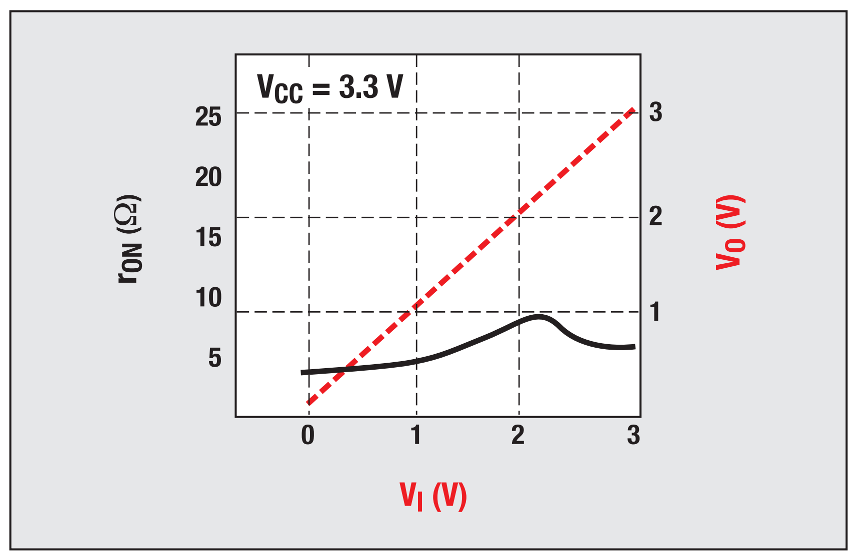
CBTLV：3.3V/2.5V通用型总线开关系列

- CMOS开关由并联的NFET和PFET组成
- 支持3.3V/2.5V工作（V_{CC} = 2.3V至3.6V）
- 当把正信号施加在NFET栅极上而将低电平信号施加于PFET栅极上时，开关开通（/OE为低电平）
- 当把低电平信号施加在NFET栅极上而将正信号施加于PFET栅极上时，开关关断（/OE为高电平）
- 双向工作（源极和漏极可互换）
- 可提供轨至轨I/O (RRIO) 信号传输（无电压箝位）

CBT3245 Logic Diagram



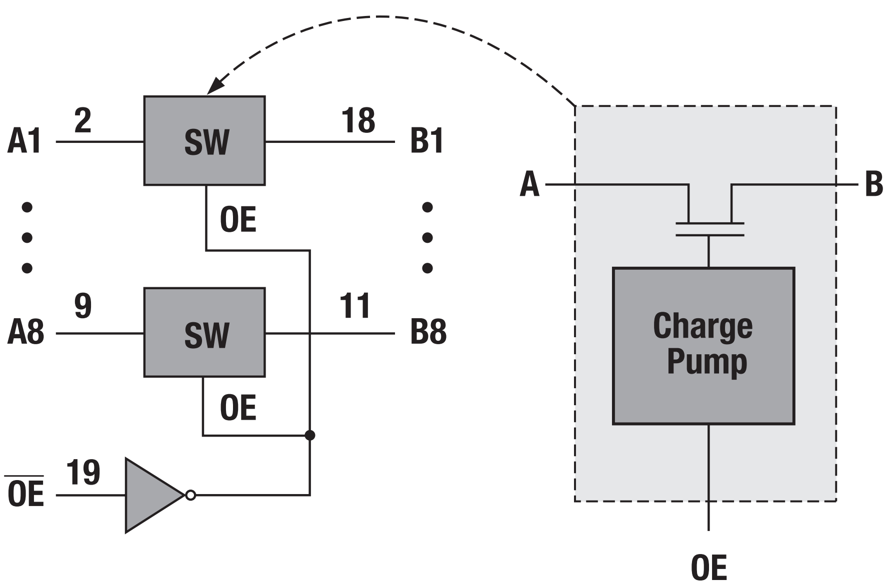
CBTLV V_{IN}/V_{OUT} Graph



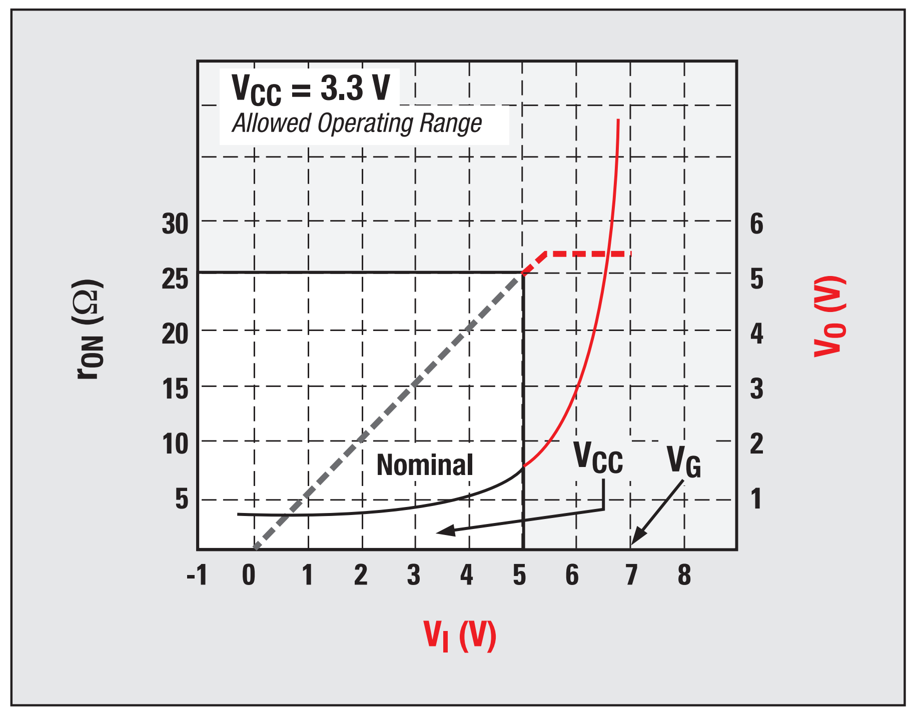
CB3Q：高带宽总线开关系列

- 高带宽数据通路（高达500MHz）
- 可提供低且平坦的导通电阻 (r_{on}) 特性
- 支持从0V至5V的轨至轨I/O (RRIO) 开关工作
- V_{CC}工作范围：2.3V至3.6V
- 非常适合于宽带通信和网络系统
- 相当于IDT QuickSwitch产品的IDTQS3VH HotSwitch系列

CB3Q3245 Logic Diagram



CB3Q V_{IN}/V_{OUT} Graph

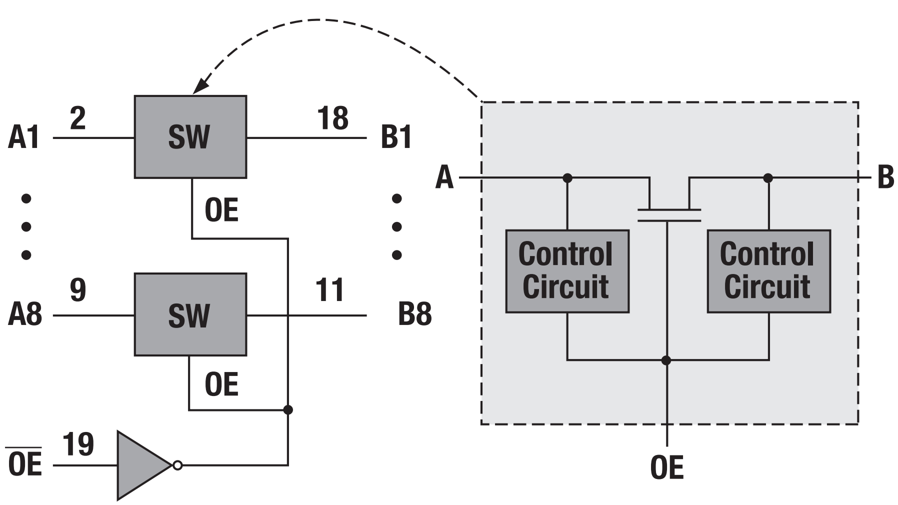


数字总线开关：CB3T

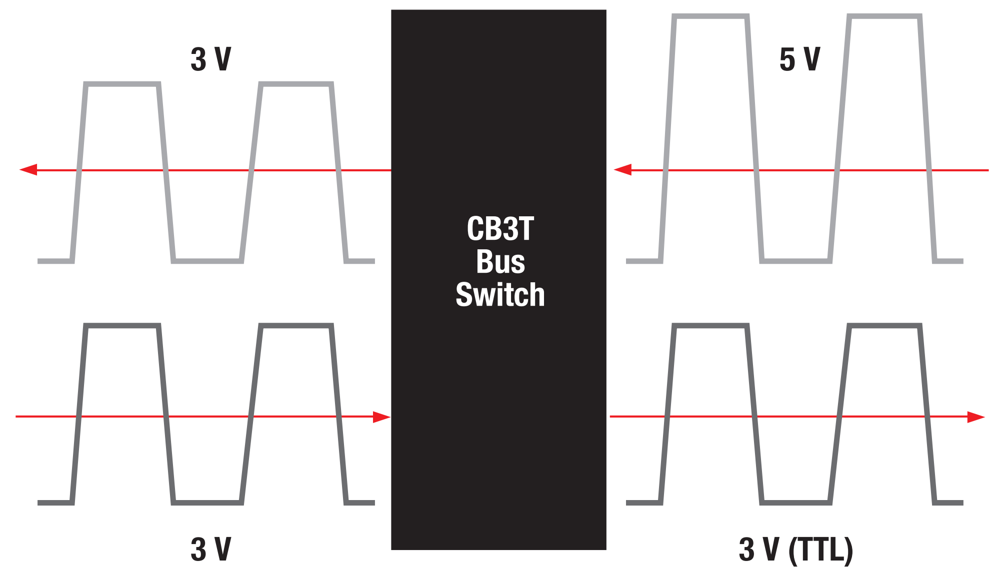
CB3T：低电压转换器总线开关系列

- 输出电压转换跟踪V_{CC}
  ○5V输入至3.3V输出电平移位 (V_{CC} = 3.3V)
  ○5V/3.3V输入至2.5V输出电平移位 (V_{CC} = 2.5V)
- 完全支持混合模式信号工作（2.5V、3.3V和5V环境）
- V_{CC}工作范围：2.3V至3.6V
- 低I_{CC}非常适合于笔记本电脑、PDA、手机和数码相机

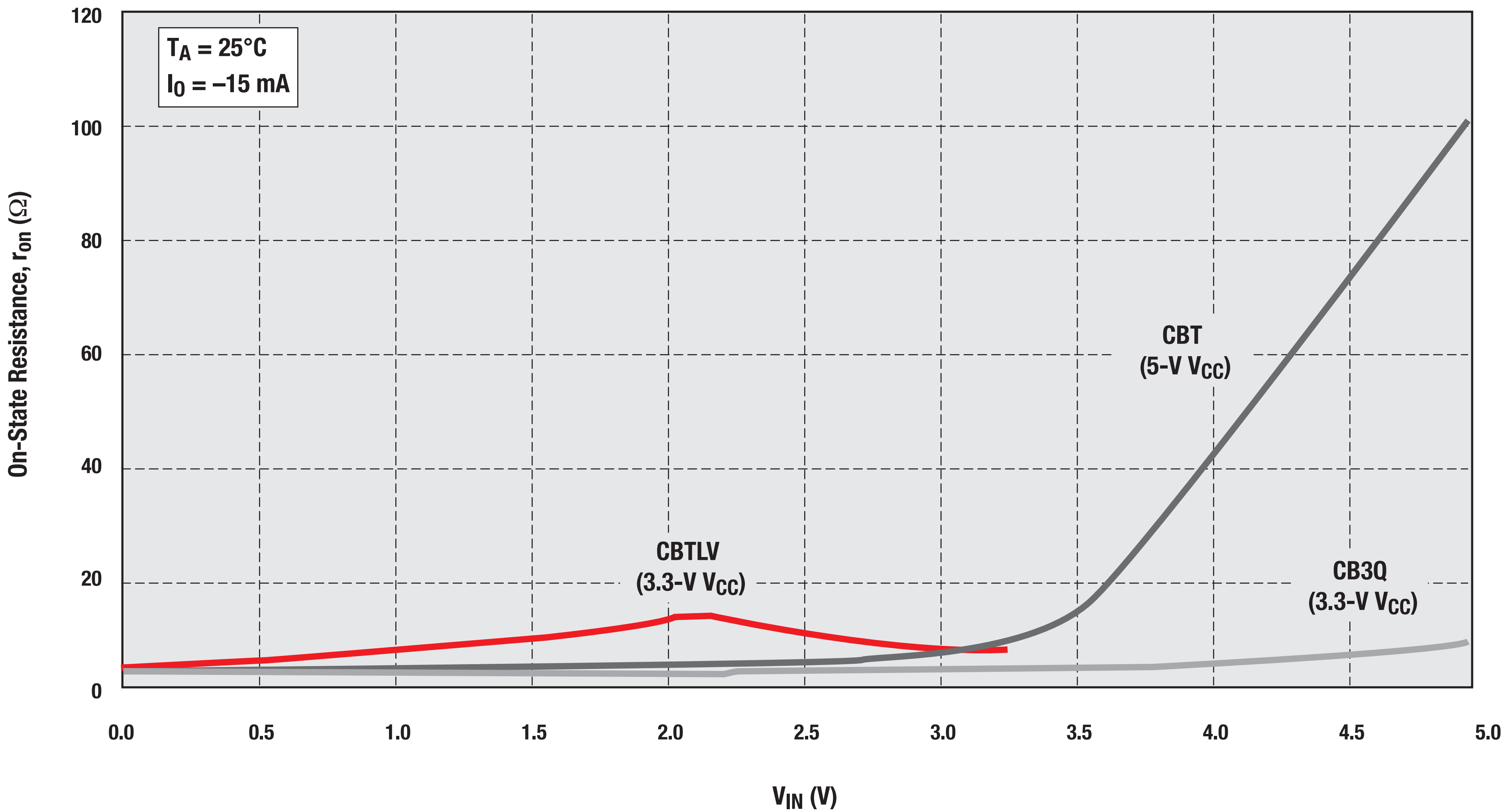
CB3T3245 Logic Diagram



Mix-Mode Signal Operation



CBT、CBTLV和CB3Q总线开关系列的典型r_{on}与V_{IN}关系之比较



转换电压箝位器 (TVC)

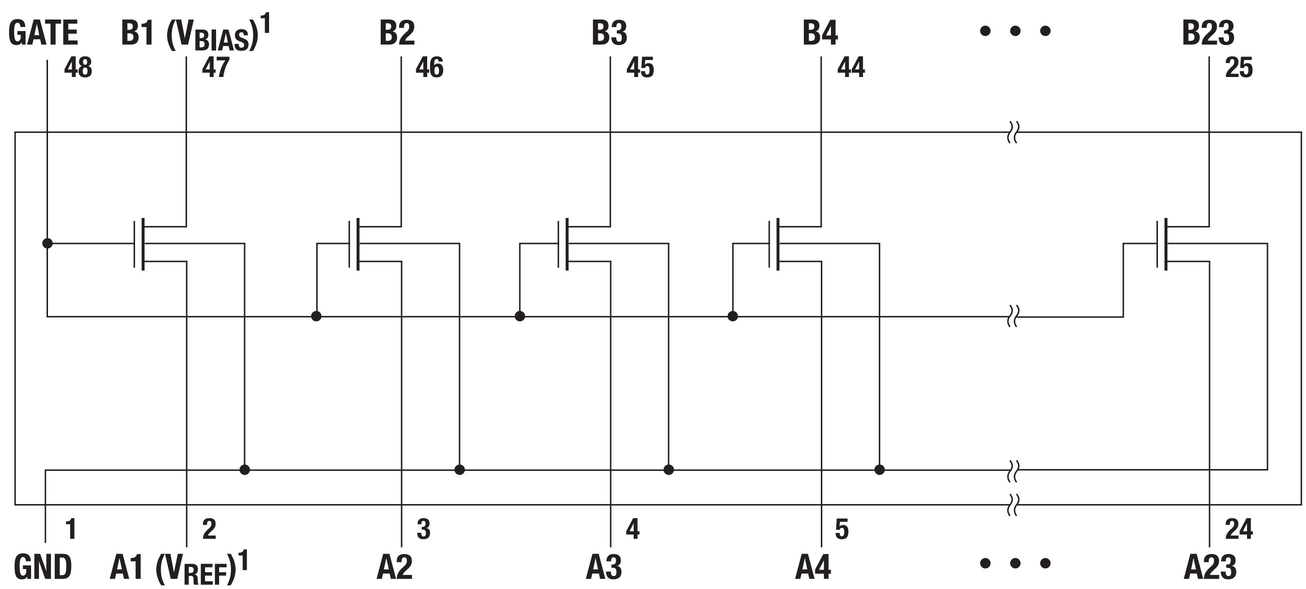
主要特点

- 具有过冲保护功能
- 电压转换器或电压箝位器
- 绝对最大额定值范围为7V至－0.5V

TVC器件

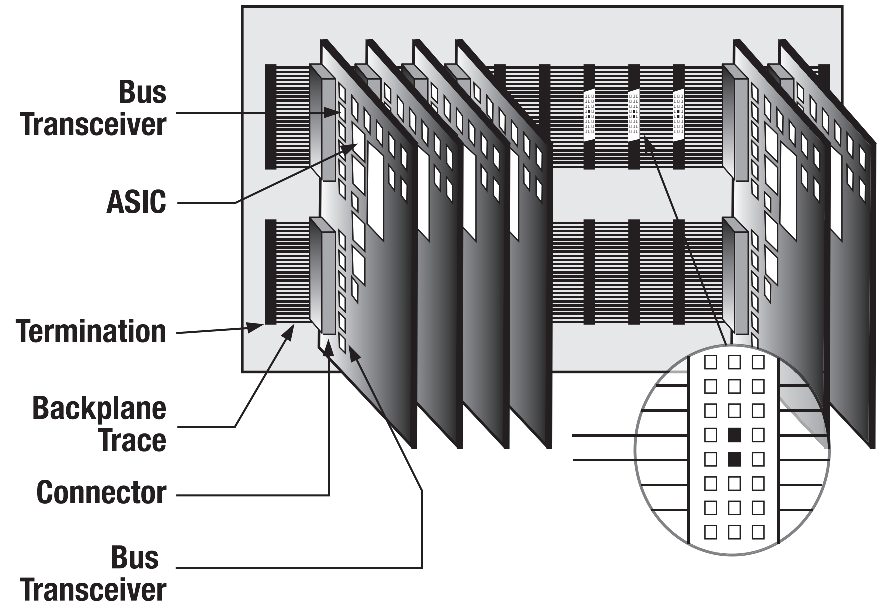
Device	Bit
TVC3306	2
TVC3010	10
TVC16222A	22

Logic Diagram (Positive Logic)



GTLP和VME

GTLP和VME是为高性能多插槽并行背板而特别设计的。



GTLP

- 漏极开路技术
- 可提供高频率（高达100MHz的时钟）
- 标准的引脚配置可实现从标准逻辑器件的简易型过渡
- 信号完整性较之标准逻辑器件有所改善

VME

- 推挽式输出结构
- 采用传统终接拓扑结构时可提供40Mbps的数据传输速率
- 返回兼容现有的VME背板
- 降低了输入门限以提升抗噪声性能

应用

- 海量存储器
- ISDN远程访问
- 因特网路由器
- ATM交换机
- 无线基站
- 飞行设备
- 工业控制
- 航空航天
- 运输
- 医疗
- 仪表系统

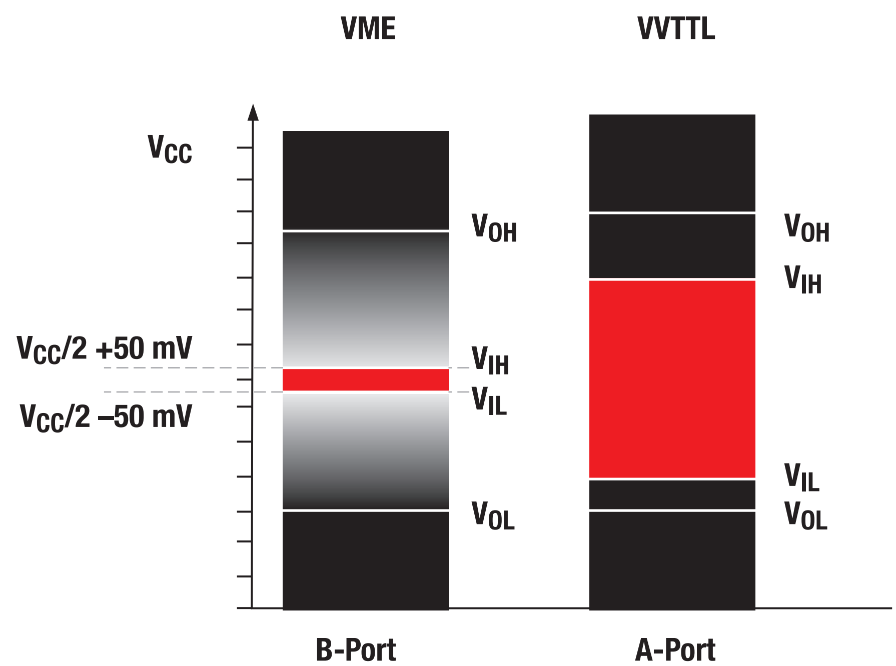
SN74VMEH22501/A UBT：适合低电压环境的VME兼容型器件

好处

- 延长了VME特性总线的寿命
- 支持2eVME和2eSST协议 (VITA1.5)
- 抗噪声性能有所增强
- 支持透明、闭锁或定时模式
- 在两个端口上均具有5V容限
- 带预充电的完整带电插拔能力
- A端口上的总线保持和串联电阻器
- 在标准VME背板上提供了高达320Mbps的数据传输速率，而在VME320背板（星形拓扑结构）上提供了高达1Gbps的数据传输速率
- VMEH22501：0℃至85℃
- VMEH22501A：-40℃至85℃

特性

- 更严格的输入门限 ($V_{CC}/2 \pm 50mV$)
- -48/64mA驱动能力
- 强大的AC上拉/下拉能力以驱动背板（缓慢的边缘速率）
- BIAS-V_{CC}用于在带电插拔期间控制预充电



反相缓冲器和驱动器

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																						
			ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AUP	BCT	CD4K	F	FCT	HC	HCT	LS	LV-A	LVC	LVT	S	TTL
Single Buffers/Drivers	OD	1G06										✔	✔									✔			
	3S	1G240										✔	✔									✔			
Single Inverters	PP	1G04				✔	✔					✔	✔									✔			
Single Schmitt-Trigger Inverters	PP	1G14				✔	✔					✔										✔			
Unbuffered Single Inverters	PP	1GU04				✔						✔										✔			
Dual Buffers/Drivers	3S	2G06										✔										✔			
		2G240										✔										✔			
Dual Inverters	PP	2G04										✔										✔			
		2GU04																				✔			
Dual Schmitt-Trigger Inverters	PP	2G14																				✔			
Triple Bufers/Drivers	OD	3G06																				✔			
Triple Inverters	PP	3G04																				✔			
Triple Schmitt-Trigger Inverters	PP	3G14																				✔			
Unbuffered Triple Inverters	PP	3GU04																				✔			
Hex Buffers/Drivers	OC	06																		✔					✔
	OD	06										✔									✔	✔			
	OC	16																							✔
	3S	366																✔							
		368																✔	✔	✔					
	OC	1005						✔																	
Hex Buffers/Converters	PP	4009													✔										
Hex Buffers/Converters	PP	4049													✔			✔							
Hex Drivers	PP	**1004**						✔			✔														

缓冲器、驱动器和收发器

反相缓冲器和驱动器（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																						
			ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AUP	BCT	CD4K	F	FCT	HC	HCT	LS	LV-A	LVC	LVT	S	TTL
Hex Inverters	PP	04		✔	✔	✔	✔	✔	✔		✔	✔				✔		✔	✔	✔	✔	✔		✔	✔
	CP	11004		✔	✔																				
	OC	05						✔												✔				✔	✔
	OD	05		✔	✔	✔												✔			✔				
	OC	1005						✔																	
	PP	4069													✔										
Hex Schmitt-Trigger Buffers/Drivers	PP	40106													✔										
Hex Schmitt-Trigger Inverters	PP	14		✔	✔	✔	✔		✔			✔						✔	✔	✔	✔	✔			✔
		19																		✔					
Strobed Hex Inverters/Buffers	3S	4502													✔										
Unbuffered Hex Inverters	PP	U04				✔						✔						✔			✔	✔			
Octal Buffers/Drivers	3S	240	✔	✔	✔	✔	✔	✔			✔	✔		✔		✔		✔	✔	✔	✔	✔	✔	✔	
		11240		✔	✔																				
		540	✔	✔	✔	✔	✔	✔						✔			✔	✔	✔	✔	✔	✔	✔		
	OC	756									✔			✔											
Octal Buffers and Line/MOS Drivers with Series Damping Resistors	3S	2240	✔											✔		✔									
Oscillator Drivers for Crystal Oscillator or Ceramic Resonator	PP	1404																				✔			
10-Bit Buffers/Drivers	3S	828																				✔			
		29828						✔																	
11-Bit Line/Memory Drivers	3S	5401	✔																						
12-Bit Line/Memory Drivers	3S	5403	✔																						
16 Bit Buffers/Drivers	3S	16240	✔		✔	✔	✔		✔	✔		✔					✔					✔	✔		
		16540	✔			✔	✔															✔			
16-Bit Buffers/Drivers with Series Damping Resistors	3S	162240															✔						✔		
32-Bit	3S	32240																				✔	✔		

缓冲器、驱动器和收发器

同相缓冲器和驱动器

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																										
			ABT	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AUP	AVC	BCT	64 BCT	CD 4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S	TTL
Single Buffers		1G34												✔												✔			
Single Bus Buffers	OD	1G07											✔	✔												✔			
	PP	1G17											✔	✔												✔			
	3S	1G125				✔	✔						✔	✔												✔			
		1G126				✔	✔						✔	✔												✔			
Dual	PP	2G07											✔	+												✔			
Dual Bus Buffers	OD	2G17												+												✔			
	PP	2G34											✔	+												✔			
	3S	2G125											✔	✔												✔			
		2G126											✔	✔												✔			
		2G241											✔	+												✔			
Triple Buffers/ Drivers	OD	3G07												+												✔			
Triple Schmitt-Trigger Buffers	PP	3G17												+												✔			
Triple Buffers Gates	PP	3G34												+												✔			
Quad True/ Complement Buffers	PP	4041																✔											
Quad Bus Buffers	3S	125	✔			✔	✔			✔			✔			✔	✔		✔		✔	✔	✔	✔	✔	✔	✔		
		126	✔			✔	✔			✔			✔			✔	✔		✔		✔	✔	✔	✔		✔	✔		
Hex Buffers	PP	34											✔																
	OC	1035							✔																				
	3S	4503																✔											
Hex Buffers/ Converters	PP	4010																✔											
		4550																✔			✔								

缓冲器、驱动器和收发器

同相缓冲器和驱动器（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	ABT	AC	ACT	AHC	AHCT	ALB	ALS	ALVC	ALVT	AS	AUC	AUP	AVC	BCT	64BCT	CD4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S	TTL
Hex Buffers/ OC 07 Line Drivers	3S	365																			✔	✔	✔						
	3S	367				✔	✔														✔	✔	✔	✔					✔
	OC	07																					✔						✔
	OD	07											✔											✔		✔			
	OC	17																											✔
	OC	35							✔																				
Hex Schmitt-Trigger Buffers	PP	17											✔																
Hex Drivers	PP	1034							✔			✔																	
Octal	3S	241	✔	✔	✔				✔			✔				✔			✔		✔	✔	✔				✔	✔	
	3S	244	✔	✔	✔	✔	✔		✔	✔		✔	✔			✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	
	3S	1244							✔																				
	CP/3S	11244		✔	✔																								
	3S	541	✔	✔	✔	✔	✔		✔							✔			✔	✔	✔	✔	✔	✔	✔	✔	✔		
	OC	757										✔				✔	✔												
	OC	760							✔			✔				✔													
Octal with Series Damping Resistors	3S	2244	✔													✔				✔						✔			
	3S	25244														✔	✔												
Octal Buffers	3S	465																					✔						
Octal Buffers and Line/MOS Drivers with Series Damping Resistors	3S	2241	✔													✔													
Octal Line Drivers/ MOS Drivers	3S	2541							✔											✔									
10-Bit	3S	827	✔																	✔						✔			
	3S	29827							✔							✔													
10-Bit with Series Damping Resistors	3S	2827	✔													✔				✔									

缓冲器、驱动器和收发器

同相缓冲器和驱动器（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*

OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	ABT	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AUP	AVC	BCT	64 BCT	CD 4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S	TTL
10-Bit Universal Schmitt-Trigger Buffers	3S	8151																						✔					
11-Bit Line/ Memory Drivers	3S	5400	✔																										
12-Bit Line/ Memory Drivers	3S	5402	✔																										
16-Bit	3S	16241	✔																								✔		
		16244	✔	✔	✔	✔	✔	✔		✔	✔		✔		✔					✔						✔	✔		
		16541	✔		✔	✔	✔																			✔	✔		
16-Bit with Series Damping Resistors	3S	162241																									✔		
		162244								✔	✔									✔						✔	✔		
		162541																									✔		
18-Bit	3S	16825	✔		✔					✔																			
18-Bit with Series Damping Resistors	3S	162825	✔																										
20-Bit	3S	16827	✔		✔					✔	✔				✔					✔									
20-Bit with Series Damping Resistors	3S	162827	✔							✔	✔									✔									
1-Bit to 2-Bit Address Drivers	3S	162830								✔																			
1-Bit to 4-Bit Address Drivers	3S	16344								✔																			
		162344								✔																			
1-Bit to 4-Bit Address Registers/ Drivers	3S	162831								✔																			
		162832								✔																			
1-Bit to 4-Bit Address Registers/Drivers with Series Damping Resistors	3S	162832								✔																			
32-Bit	3S	32244								✔	✔		✔													✔	✔		

缓冲器、驱动器和收发器

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

同相缓冲器和驱动器（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																										
			ABT	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AUP	AVC	BCT	64 BCT	CD 4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S	TTL
32-Bit with Series Resistors	3S	322244																									✔		
4-Segment Liquid Crystal Display Drivers	PP	4054																✔											

奇偶校验收发器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY				
			ABT	ACT	ALS	BCT	F
Octal with Parity Generators/Checkers	3S	657	✔				✔
8-Bit to 9-Bit	PP	833	✔				
		853	✔				
		29854			✔	✔	
Dual 8-Bit to 9-Bit	PP	16833	✔				
		16853	✔				
16-Bit with Parity Generators/Checkers	3s	16657	✔	✔			

缓冲器、驱动器和收发器

寄存收发器

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector *CP = center pin* *OD = open drain* *PP = push-pull* *3S = 3-state*

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY														
			ABT	AC	ACT	ALS	ALVC	AS	AVC	BCT	F	FCT	HC	HCT	LS	LVC	LVT
Octal	3S	52										✔					
		543	✔							✔	✔	✔				✔	✔
		11543			✔												
		646	✔	✔	✔	✔		✔		✔		✔	✔	✔	✔	✔	✔
		648				✔		✔							✔		
		651	✔		✔	✔											
		652	✔	✔	✔	✔		✔		✔		✔	✔	✔	✔	✔	✔
		11652			✔												
	OC/3S	653				✔											
		654				✔											
Octal with Series Damping Resistors	3S	2543										✔					
		2646										✔					
		2652										✔					
		2952	✔													✔	✔
16-Bit	3S	16470	✔														
		16543	✔		✔		✔					✔				✔	✔
		162543										✔					
		16646	✔		✔		✔		✔			✔				✔	✔
		162646										✔					
		16851			✔												
		16862	✔	✔	✔							✔				✔	✔
		162652										✔					
		16962	✔		✔		✔					✔				✔	✔
		162952										✔					

缓冲器、驱动器和收发器

寄存收发器（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY														
			ABT	AC	ACT	ALS	ALVC	AS	AVC	BCT	F	FCT	HC	HCT	LS	LVC	LVT
18-Bit	3S	16524					✔										
		16525					✔										
		162525					✔										
32-Bit	3S	32543	✔														
4-to-1 Multiplexed/Demultiplexed	3S	162460	✔														

标准收发器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																									
			ABT	AB TE	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AVC	BCT	64 BCT	F	FCT	GTL	GT LP	HC	HCT	LS	LV-A	LV-AT	LVC	LVT
Dual 1-Bit LVTTL to GTLP Adjustable Edge Rate with Split LVTTL Port, Feedback Path and Selectable Polarity	3S	1395																			✔							
2-Bit LVTTL to GTLP Adjustable Edge Rate with Selectable Parity	3S	1394																			✔							
Quad	3S	243								✔												✔	✔	✔				
Quad Tridirectional	3S	442																										
8-Bit Transceivers and Transparent D-Type Latches with Four Independent Buffers	pp	16973									✔																	
8-Bit LVTTL to GTLP	3S	306																			✔							

缓冲器、驱动器和收发器

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

标准收发器（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																									
			ABT	AB TE	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AVC	BCT	64 BCT	F	FCT	GTL	GT LP	HC	HCT	LS	LV-A	LV-AT	LVC	LVT
Octal	3S	245	✔		✔	✔	✔	✔		✔	✔		✔	✔		✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔
		1245								✔																		
		11245			✔	✔																						
		620	✔							✔																		
	OC	621								✔																		
	3S	623	✔		✔	✔				✔						✔			✔			✔	✔	✔				
		11623				✔																						
		638								✔			✔															
		639								✔																		
		640	✔							✔			✔			✔						✔	✔	✔				
	OC	641								✔			✔											✔				
		642								✔														✔				
	3S	645								✔			✔									✔	✔	✔				
		1645								✔																		
Octal with Series Damping Resistors	3S	2245	✔																								✔	✔
Octal Transceivers and Line/MOS Drivers with B-Port Series Damping Resistors	3S	2245	✔													✔			✔									
Octal with Adjustable Output Voltage	3S	3245																									✔	
Octal Dual Supply with Configurable Output Voltage	3S	4245																									✔	
Octal with 3.3-V to 5-V Shifters	3S	4245																									✔	

缓冲器、驱动器和收发器

标准收发器（续）

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																									
			ABT	AB TE	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AVC	BCT	64 BCT	F	FCT	GTL	GT LP	HC	HCT	LS	LV-A	LV-AT	LVC	LVT
9-Bit	3S	863	✔																								✔	
		29863								✔						✔												
		29864														✔												
10-Bit	3S	861	✔																								✔	
11-Bit Incident Wave Switching	3S/OC	16246		✔																								
16-Bit	3S	16245	✔		✔	✔		✔	✔		✔	✔		✔	✔				✔								✔	✔
		16623	✔			✔																						
		16640	✔																									
16-Bit Bus Transceivers and Transparent D-Type Latches with Eight Independent Buffers	3S	32973									✔																	
16-Bit Incident Wave Switching	3S	16245		✔																								
16-Bit with Series Damping Resistors	3S	16245									✔	✔																
16-Bit with Series Damping Resistors	3S	162245	✔									✔							✔								✔	✔
16-Bit Level Shifting	3S	164245									✔				✔													
16-Bit LVTTL to GTLP Adjustable Edge Rate	3S	1645																			✔							

缓冲器、驱动器和收发器

标准收发器（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																									
			ABT	AB TE	AC	ACT	AHC	AH CT	ALB	ALS	AL VC	AL VT	AS	AUC	AVC	BCT	64 BCT	F	FCT	GTL	GT LP	HC	HCT	LS	LV-A	LV-AT	LVC	LVT
16-Bit LVTTL to GTLP	3S	16945																			✔							
18-Bit Bus Interface	3S	16863	✔			✔					✔																	
18-Bit LVTTL to GTL/GTL+	pp	16622																		✔								
		16923																		✔								
18-Bit LVTTL to GTLP Source Synchronous Clock Outputs	3S	1627																			✔							
		16927																			✔							
20-Bit	3S	16861				✔																						
25 Octal	3S	25245	✔													✔	✔											
	OC	25642														✔												
32-Bit	3S	32245	✔								✔			✔													✔	✔
32-Bit LVTTL to GTLP	3S	32945																			✔							
32-Bit LVTTL to GTLP Adjustable Edge Rate	3S	3245																			✔							

触发器、锁存器和寄存器

D类触发器（三态）

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																				
			ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AVC	BCT	F	FCT	HC	HCT	LS	LV-A	LVC	LVT	S
Dual 4-Bit Edge-Triggered	3S	874						✔			✔												
		876						✔			✔												
Quad	3S	173															✔	✔	✔				
Octal Bus Interface	3S	825									✔					✔							
		29825												✔									
Octal Edge-Triggered	3S	374	✔	✔	✔	✔	✔	✔	✔		✔			✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	3S/CP	11374			✔																		
	3S	574	✔	✔	✔	✔	✔	✔			✔			✔	✔	✔	✔	✔		✔	✔	✔	
		575						✔															
		576						✔			✔												
		577						✔															
Octal Edge-Triggered Dual Rank	3S	4374									✔												
Octal Edge-Triggered with Series Damping Resistors	3S	2374														✔							
		2574														✔							
Octal Inverting	3S	543	✔	✔	✔			✔									✔	✔					
		564		✔	✔			✔									✔	✔					
9-Bit Bus Interface	3S	823	✔								✔					✔					✔		
10-Bit Bus Interface	3S	821	✔								✔					✔					✔		
		29821						✔						✔									
10-Bit with Dual Outputs	3S	16820							✔														
		162820							✔														
16 Bit Edge-Triggered	3S	16374	✔	✔	✔	✔	✔		✔	✔		✔	✔			✔					✔	✔	
		162374							✔							✔						✔	
18-Bit	3S	16823	✔		✔				✔							✔							
		162823	✔													✔							

触发器、锁存器和寄存器

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

D类触发器（三态）（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																				
			ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AVC	BCT	F	FCT	HC	HCT	LS	LV-A	LVC	LVT	S
20-Bit	3S	16721							✔														
		162721							✔														
		16722											✔										
		16821	✔						✔	✔													
32-Bit Edge-Triggered	3S	32374							✔	✔											✔	✔	
		322374																				✔	

D类触发器（非三态）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																		
			ABT	AC	ACT	AHC	AHCT	ALS	AS	AUC	AUP	CD4K	F	FCT	HC	HCT	LS	LV-A	LVC	LVT	S
Single Edge-Triggered	PP	1G79								✔	✔								✔		
		1G80								✔	✔								✔		
Single Edge-Triggered with Preset and Clear	PP	1G74								✔	✔										
		2G74																	✔		
Dual	P	4013										✔									
		74		✔	✔	✔	✔	✔	✔	✔			✔		✔	✔	✔	✔	✔		✔
	CP	11074		✔	✔																
Dual Edge-Triggered	PP	2G79								✔									✔		
		2G80								✔									✔		
Quad	PP	175		✔	✔			✔	✔				✔		✔	✔	✔	✔			✔
	CP	11175		✔																	
	PP	40175										✔									
Hex	PP	174		✔	✔	✔	✔	✔	✔				✔		✔	✔	✔	✔			✔
		40174										✔									
Hex with Enable	PP	378															✔				
Octal	PP	273	✔	✔	✔	✔	✔	✔						✔	✔	✔	✔	✔		✔	
Octal with Enable	PP	377	✔										✔	✔	✔	✔	✔				

触发器、锁存器和寄存器

✔ Product available in technology indicated + New product planned in technology indicated

OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

J-K触发器

DESCRIPTION	TYPE	TECHNOLOGY											
		AC	ACT	ALS	AS	CD4K	F	HC	HCT	LS	LVC	S	TTL
Dual Edge-Triggered Master-Slave	4027					✔							
Dual Edge-Triggered with Reset	73							✔	✔	✔			
	107							✔	✔	✔			✔
Dual Edge-Triggered with Set and Reset	112	✔	✔	✔			✔	✔	✔	✔	✔	✔	
Dual Positive Edge-Triggered with Set and Reset	109	✔	✔	✔	✔		✔	✔	✔	✔			

D类锁存器（三态）

DESCRIPTION	TYPE	TECHNOLOGY																					
		ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AVC	BCT	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S
Single	1G373																				✔		
1-Bit to 4-Bit Address Registers/ Drivers	162831							✔															
	162832							✔															
Dual 4-Bit	873						✔																
Octal Inverting Transparent	533	✔	✔	✔			✔			✔						✔	✔						
	563		✔	✔			✔									✔	✔						
Octal Transparent	373	✔	✔	✔	✔	✔	✔	✔		✔			✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	11373			✔																			
	573	✔	✔	✔	✔	✔	✔			✔			✔	✔	✔	✔	✔		✔	✔	✔	✔	
	580						✔																
Octal Transparent Read Back	990						✔																
	666						✔																
	667						✔																
Octal Transparent with Series Damping Resistors	2372													✔	✔								
	2573														✔								
Octal Edge-Triggered Read Back	996						✔																
9-Bit Transparent	8744	✔					✔								✔								
	29843												✔										
9-Bit Transparent Read Back	992						✔																

触发器、锁存器和寄存器

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

D类锁存器（三态）（续）

DESCRIPTION	TYPE	TECHNOLOGY																				
		ABT	AC	ACT	AHC	AHCT	ALS	ALVC	ALVT	AS	AUC	AVC	BCT	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	LVT	S
10-Bit Transparent	841	✔					✔								✔						✔		
10-Bit Transparent Read Back	994							✔															
12-Bit to 24-Bit Multiplexed	16260	✔						✔															
12-Bit to 24-Bit Multiplexed with Series Damping Resistors	162260	✔						✔															
16-Bit Transparent	16373	✔	✔	✔	✔	✔		✔	✔		+	✔			✔						✔	✔	
	162373	✔						✔							✔							✔	
18-Bit Transparent	16843	✔																					
20-Bit Transparent	16841	✔		✔				✔							✔								
	162841	✔						✔							✔								
32-Bit Transparent	32373								✔												✔	✔	

其他锁存器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY				
			ALS	CD4K	HC	HCT	LS
Dual 2-Bit Bistable Transparent	PP	75			✔	✔	
Dual 4-Bit with Strobe 3S	3S	4508		✔			
4-Bit Bistable	PP	75					✔
		375					✔
Quad Clocked D	PP	4042		✔			
	3S	4076		✔			
Qua d NAND R-S	3S	4044		✔			
Quad NOR R-S	3S	4043		✔			
Quad S-R	PP	279					✔
8-Bit Addressable	PP	259	✔		✔	✔	✔
		4099		✔			
		4724		✔			
4-by-4 Register Files	3S	670			✔	✔	✔
Dual 16-by-4 Register Files	3S	870	✔				

触发器、锁存器和寄存器

移位锁存器

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY													
			AC	ACT	AHC	AHCT	ALS	ALVC	AS	CD4K	F	FCT	HC	HCT	LS	LV-A
4-Bit Bidirectional Universal Shift	PP	194							✔				✔	✔	✔	
		195											✔			
		40194								✔						
4 Stage Parallel-In/Parallel-Out Shift	PP	4035								✔						
Dual 4 Stage Static Shift	PP	4015								✔			✔			
8-Bit Diagnostic Scan	3S	818										✔				
8-Bit Multilevel Pipeline	3S	520										✔				
8-Bit Serial In, Parallel Out Shift	PP	164	✔	✔			✔						✔	✔	✔	✔
8-Bit Parallel In, Serial Out Shift with Gated Clock	PP	165					✔						✔	✔	✔	✔
8-Bit Parallel In, Serial In, Serial Out Shift	PP	166					✔						✔	✔	✔	✔
8-Bit Shift with Output Registers	OC	594			✔	✔							✔		✔	✔
8-Bit Shift with 3-State Output Registers	3S	595			✔	✔							✔		✔	✔
8-Bit Shift with 3-State Output Latches	3S	596													✔	
8-Bit Shift with Input Latches	PP	597											✔	✔	✔	
8-Bit Shift with Input Latches and 3-State Input/Output Ports	3S	598													✔	
8-Bit Universal Shift/Storage	3S	299	✔	✔			✔				✔		✔	✔	✔	
		323	✔				✔									
8-Stage Static Shift	PP	4014								✔						
		4021								✔						
8-Stage Shift-and-Store Bus	3S	4094								✔			✔	✔		
8-Stage Static Bidirectional Parallel-/Serial- Input/Output Bus	PP	4034								✔						
16-Bit Serial In/Out with 16 Bit Parallel Out Storage	PP	673													✔	
		674													✔	
64-Stage Static Shift	PP	4031								✔						
Dual 64-Stage Static Shift	3S	4517								✔						
Serial-to-Parallel Interface	OC/PP	8153														✔

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✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

“与”门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																
			AC	ACT	AHC	AHCT	ALS	ALVC	AS	AUC	AUP	CD4K	F	HC	HCT	LS	LV	LVC	S
Single 2-Input	PP	1G08			✔	✔				✔	✔							✔	
Single 3-Input	PP	1G11									+							✔	
Single 3-Input AND-OR	PP	1G0832									+							✔	
Single 3-Input OR-AND	PP	1G3208									+							✔	
Dual 2-Input	PP	2G08								✔	+							✔	
Quad 2 Input	PP	08	✔	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔
	CP	11008	✔	✔															
	OC	09					✔									✔			✔
	PP	4081										✔							
Quad 2-Input Buffers/Drivers	PP	1008							✔										
Quad 2-Input with Schmitt-Trigger Inputs	PP	7001												✔					
Dual 4-Input	PP	21					✔		✔				✔	✔	✔	✔	✔		
		4082										✔							
Triple 3-Input	PP	11	✔	✔			✔		✔		+		✔	✔	✔	✔	✔		
		4073										✔							
Hex 2-Input Drivers	PP	809							✔										

可配置门

DESCRIPTION	TYPE	TECHNOLOGY		
		CD4K	LS	S
Dual 2-Wide 2-Input AND-OR Invert	51			✔
	4085	✔		
2-Wide 2-Input and 2-Wide 3-Input AND-OR- Invert	51		✔	
Expandable 4-Wide 2-Input	4086	✔		
Expandable 8-Input	4048	✔		
Quad AND-OR Select	4019	✔		

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“异或”门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY														
			AC	ACT	AHC	AHCT	ALS	AS	AUC	CD4K	F	HC	HCT	LS	LV-A	LVC	S
Single 2-Input	PP	1G86			✔	✔			✔							✔	
Single 3-Input	PP	1G386														✔	
Dual 2-Input	PP	2G86							✔							✔	
Quad 2 Input	PP	4030								✔						✔	
		4070								✔						✔	
		86	✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔
	CP	11086	✔														
	OC	136												✔			

“异或非”门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			CD4K	HC	LS
Quad 2-Input	OC	266			✔
	OD	266		✔	
	pp	4077	✔		
		7266		✔	

“与非”门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																	
			AC	ACT	AHC	AHCT	ALS	ALVC	AS	AUC	AUP	CD4K	F	HC	HCT	LS	LV-A	LVC	S	TTL
Single 2-Input	PP	1G00			✔	✔				✔	✔							✔		
	OD	1G38									+							✔		
Single 3-Input Positive	PP	1G10									+							✔		
Dual 2-Input	PP	2G00								✔	+							✔		
	OD	2G38									+							✔		
Dual 2-Input with Schmitt-Trigger Input	PP	8003							✔											
		2G132									+							✔		
Dual 2-Input Buffers/Drivers	PP	40107										✔								

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“与非”门（续）

✔ Product available in technology indicated　＋ New product planned in technology indicated

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DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																	
			AC	ACT	AHC	AHCT	ALS	ALVC	AS	AUC	AUP	CD4K	F	HC	HCT	LS	LV-A	LVC	S	TTL
Quad 2-Input	PP	00	✔	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔	✔
	CP	11000	✔	✔																
	OC	03					✔									✔				
	OD	03												✔	✔					
	PP	4011										✔								
	3S	26														✔				
	PP	37					✔									✔			✔	
	OC	38					✔						✔			✔			✔	✔
Quad 2-Input Buffers/Drivers		1000							✔											
Quad 2-Input Unbuffered	PP	4011										✔								
Quad - Input with Schmitt-Trigger Inputs	PP	132			✔	✔								✔	✔	✔	✔		✔	
		4093										✔								
Hex 2-Input Drivers	PP	804					✔		✔											
Triple 3-Input	PP	10	✔	✔			✔	✔	✔				✔	✔	✔	✔	✔	✔	✔	✔
		4023										✔								
Dual 4-Input	PP	4012										✔								
		20	✔	✔			✔		✔				✔	✔	✔	✔	✔		✔	
Dual 4-Input Positive 50-Ω Line Drivers	PP	140																	✔	
8-Input	PP	30					✔		✔				✔	✔	✔	✔				
	CP	11030		✔																
8-Input AND/NAND	PP	4068										✔								
13-Input	PP	133					✔													

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“或非”门

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																
			AC	ACT	AHC	AHCT	ALS	AS	AUC	AUP	CD4K	F	HC	HCT	LS	LV-A	LVC	S	TTL
Single 2-Input	PP	1G02			✔	✔			✔	✔							✔		
Single 3-Input	PP	1G27								+							✔		
Dual 2-Input		2G02							✔	+							✔		
Quad 2-Input	PP	4001									✔								
		02	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔	✔
	OC	33					✔								✔				
Quad 2-Input with Schmitt-Trigger Inputs	PP	7002											✔						
Quad 2-Input Unbuffered	PP	4001									✔								
Quad 2-Input 50- Line Drivers	PP	128																	✔
Hex 2-Input Drivers	PP	805					✔	✔											
Triple 3-Input	PP	4025									✔								
		27					✔	✔				✔	✔	✔	✔	✔			
Dual 4-Input	PP	4002									✔		✔						
Dual 4-Input with Strobe	PP	25																	✔
Dual 5-Input	PP	260										✔						✔	
8-Input NOR/OR	PP	4078									✔								

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✔ *Product available in technology indicated* + *New product planned in technology indicated*

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“或”门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																	
			AC	ACT	AHC	AHCT	ALS	ALVC	AS	AUC	AUP	CD4K	F	HC	HCT	LS	LV-A	LVC	S	TTL
Single 2-Input	PP	1G32			✔	✔				✔	✔							✔		
Single 3-Input	PP	1G332									+							✔		
Single 3-Input AND-OR	PP	1G0832									+							✔		
Single 3- Input OR-AND	PP	1G3208									+							✔		
Dual 2-Input	PP	2G32								✔	+							✔		
Quad 2-Input	PP	32	✔	✔	✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔	✔
	CP	11032	✔	✔																
	PP	4071										✔								
Quad 2-Input Buffers/Drivers	PP	1032							✔											
Quad 2-Input with Schmitt-Trigger Inputs	PP	7032												✔						
Hex 2-Input Drivers	PP	832					✔		✔											
Dual 4-Input	PP	4072										✔								
Dual 4-Input	PP	4075										✔		✔	✔					

I^2C逻辑器件

I^2C逻辑器件

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY			
			P82	PCA	PCF	TCA
Buffers						
Bidirectional Unity Voltage Gain Buffers for I^2C Bus and SMBus Extending		B715	✔			
Dual Bidirectional Bus Buffers		B96	✔			
Dual Bidirectional I^2C Bus and SMBus Repeaters	OD	9515A		✔		
Dual Bidirectional I^2C Bus and SMBus Voltage-Level Translators		9306		✔		
Expandable 5-Channel Bidirectional I^2C Bus and SMBus Hub	OD	9518		✔		
Level-Translating I^2C Bus Repeater	OD	9517		✔		
Hot Swappable 2-Wire Bus Buffers	OD	4311				✔
I/O Expanders						
Remote 4-Bit I^2C and SMBus I/O Expanders with Configuration Registers	PP	9536		✔		
Remote 8-Bit I/O Expanders for I^2C	PP	8574			✔	
	PP	8574A			✔	
Remote 8-Bit I^2C and SMBus Low-Power I/O Expanders with Reset and Configuration Registers	OD/PP	9557		✔		
Remote 8-Bit I^2C and SMBus Low-Power I/O Expanders with Interrupt Output, Reset and Configuration Registers	OD/PP	6107		✔		
Remote 8-Bit I^2C and SMBus I/O Expanders with Interrupt and Configuration Registers	PP	9554		✔		
	PP	9554A		✔		
Remote 8-Bit I^2C and SMBus I/O Expanders with Interrupt and Configuration Registers (Low-Power)	PP	9534		✔		
	PP	9534A		✔		
Remote 8-Bit I^2C and SMBus I/O Expanders with Interrupt Output, Reset and Configuration Registers (Low-Power)	PP	9538		✔		
Remote 16-Bit I^2C and SMBus I/O Expanders with Interrupt Output	PP	8575			✔	
	OD	8575C			✔	
Remote 16-Bit I^2C and SMBus I/O Expanders with Interrupt Output and Configuration Registers	PP	9555		✔		
Remote 16-Bit I^2C and SMBus Low-Power I/O Expanders with Interrupt Output and Configuration Registers	PP	9535		✔		
Remote 16-Bit I^2C and SMBus Low-Power I/O Expanders with Interrupt Output, Reset and Configuration Registers	PP	9539		✔		
Switches and Multiplexers						
2-Channel I^2C Bus Switch with Interrupt Logic and Reset	OD	9543A		✔		
4-Channel I^2C and SMBus Multiplexers with Interrupt Logic	OD	9544A		✔		
4-Channel I^2C and SMBus Multiplexers with Reset Functions	OD	9546A		✔		

小尺寸逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
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I^{2}C逻辑器件（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY			
			P82	PCA	PCF	TCA
4-Channel I^{2}C and SMBus Multiplexers with Interrupt Logic and Reset Functions	OD	9545A		✔		
8-Channel I^{2}C Bus and SMBus Multiplexers with Reset	OD	9548A		✔		
I/O Expanders						
Low-Voltage 8-Bit I^{2}C and SMBus I/O Expander with Interrupt Output, Reset and Configuration Registers	OD	6408				✔
Low-Voltage 16-Bit I^{2}C and SMBus I/O Expander with Interrupt Output, Reset and Configuration Registers	OD	6416				✔
Low-Voltage 24-Bit I^{2}C and SMBus I/O Expander with Interrupt Output, Reset and Configuration Registers	OD	6424				✔
LED Drivers						
Low-Voltage 7-Bit I^{2}C and SMBus LED Driver with Intensity Control and Shutdown	OD	6507				✔

单门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY							
			AHC	AHCT	AUC	AUP	CBT	CB3T	CBTLV	LVC
Configurable Multiple-Function	PP	1G57				✔				✔
		1G58				✔				✔
		1G97				✔				✔
		1G98				✔				✔
		1G99				✔				✔
Bilateral Bus Switches (Analog or Digital)	PP	1G66			✔					✔
Crystal Oscillator Drivers	PP	1GX04								✔
D-Type Flip-Flops	3S	1G374				+				✔
Edge-Triggered D-Type Flip-Flops	PP	1G79			✔	✔				✔
		1G80			✔	✔				✔
Edge-Triggered Flip-Flops with Preset and Clear	PP	1G74			✔	✔				
FET Bus Switches	PP	1G125					+		✔	
		1G384					✔			
FET Bus Switches with Level-Shifting	PP	1G125					+	✔		
		1G384					✔			
Buffer	PP	1G34				✔				✔
Inverters	PP	1GU04	✔		✔					✔
		1G04	✔	✔	✔	✔				✔

小尺寸逻辑器件

单门（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*

OC = open collector *CP = center pin* *OD = open drain* *PP = push-pull* *3S = 3-state*

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY							
			AHC	AHCT	AUC	AUP	CBT	CB3T	CBTLV	LVC
Inverting Buffers/Drivers	OD	1G06			✔	✔				✔
	3S	1G240			✔	✔				✔
Latches	3S	1G373				✔				✔
NAND	PP	1G10				+				✔
		1G11				+				✔
		1G27				+				✔
		1G332				+				✔
		1G386				+				✔
Noninverting Buffers/Drivers	OD	1G07			✔	✔				✔
Noninverting Buffers	3S	1G125	✔	✔	✔	✔				✔
		1G126	✔	✔	✔	✔				✔
Noninverting Schmitt-Trigger Buffers/Drivers	PP	1G17			✔	✔				✔
Single-Pole Double-Throw Analog Switches	PP	1G3157								✔
Schmitt-Trigger Inverters	PP	1G14	✔	✔	✔	✔				✔
2-Input AND	PP	1G08	✔	✔	✔	✔				✔
2-Input Exclusive-OR	PP	1G86	✔	✔	✔					✔
2-Input NAND	PP	1G00	✔	✔	✔	✔				✔
	OD	1G38				+				✔
2-Input NOR	PP	1G02	✔	✔	✔	✔				✔
2-Input OR	PP	1G32	✔	✔	✔	✔				✔
3-Input AND-OR	PP	1G0832				+				✔
3-Input OR-AND	PP	1G3208				+				✔
1-of-2 Decoders/Demultiplexers	PP	1G19			✔	+				✔
1-of-2 Noninverting Demultiplexers	3S	1G18				+				✔
2-of-3 Decoders/Demultiplexers	PP	1G29				+				✔
2-to-4 Line Decoders	PP	1G139				+				✔
Retriggerable Monostable Mutlivibrators with Schmitt-Trigger inputs	PP	1G123								✔

小尺寸逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated

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双门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			AUC	LVC	AUP
Single 2-to-1 Line Data Selectors/Multiplexers	PP	2G157		✔	
Single Edge-Triggered D-Type Flip-Flops with Preset and Clear	PP	2G74		✔	
Analog Multiplexers/Demultiplexers	PP	2G53	✔	✔	
Bilateral Bus Switches (Analog or Digital)	PP	2G66	✔	✔	
Edge-Triggered D-Type Flip-Flops	PP	2G79	✔	✔	+
		2G80	✔	✔	+
Inverters	PP	2G04	✔	✔	+
		2GU04	✔	✔	
Inverting Buffers/Drivers	3S	2G06	✔	✔	+
		2G240	✔	✔	+
Noninverting Buffers/ Drivers	OD	2G07	✔	✔	+
	PP	2G34	✔	✔	+
Noninverting Bus Drivers	OD	2G17		✔	+
	3S	2G125	✔	✔	+
		2G126	✔	✔	+
		2G241	✔	✔	+
Schmitt-Trigger Inverters	PP	2G14		✔	+
2-Input AND	PP	2G08	✔	✔	+
2-Input Exclusive-OR	PP	2G86	✔	✔	+
2-Input NAND	PP	2G00	✔	✔	+
	OD	2G38		✔	+
2-Input NAND with Schmitt-Trigger inputs	PP	2G132		✔	+
2-Input NOR	PP	2G02	✔	✔	+
2-input OR	PP	2G32	✔	✔	+

小尺寸逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
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三门

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY	
			LVC	AUP
Inverting Buffers/ Drivers	OD	3G06	✔	+
Noninverting Buffers/Drivers	OD	3G07	✔	+
	PP	3G17	✔	+
		3G34	✔	+
Schmitt-Trigger Inverters	PP	3G04	✔	+
		3G14	✔	+
Unbuffered Inverters	PP	3GU04	✔	

MSI功能元件

Adders

DESCRIPTION	TYPE	TECHNOLOGY						
		AC	ACT	F	HC	HCT	LS	S
9-Bit Binary Full with Fast Carry	283	✔	✔	✔	✔	✔	✔	✔

Arithmetic Logic Units

DESCRIPTION	TYPE	TECHNOLOGY	
		AS	LS
Arithmetic Logic Units/Function Generators	181	✔	✔

Parity Generators and Checkers

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY									
			AC	ACT	ALS	AS	F	FCT	HC	HCT	LS	S
Dual 8-Bit Odd	PP	480						✔				
9-Bit Odd/Even	PP	280	✔	✔	✔	✔	✔		✔	✔	✔	✔
9-Bit Binary Full with Fast Carry	PP	286				✔						
	PP	11286		✔								

MSI功能元件——计数器

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

二进制计数器

DESCRIPTION	TYPE	TECHNOLOGY											
		AC	ACT	ALS	AS	CD4K	F	FCT	HC	HCT	LS	LV-A	S
4-Bit Ripple	93								✔	✔	✔		
	293										✔		
Dual 4-Bit	393								✔	✔	✔	✔	
Dual 4-Bit Up	4520					✔			✔	✔			
Presettable 4-Bit Up/Down	4516					✔							
Presettable 4-Bit BCD Up/Down with Dual Clock and Reset	40193					✔							
Presettable Synchronous 4-Bit Up/Down	191			✔				✔	✔	✔	✔		
	193			✔					✔	✔	✔		
Programmable 4-Bit with Asynchronous Clear	40161					✔							
Synchronous 4-Bit	569			✔									
Synchronous 4-Bit with 3-State Outputs and Carry Out	561			✔									
Synchronous 4-Bit Up/Down	169			✔	✔		✔				✔		
	669										✔		
	697										✔		
Synchronous 4-Bit with Preset and Asynchronous Clear	161	✔	✔	✔	✔		✔		✔	✔	✔	✔	
Synchronous 4-Bit with Preset and Synchronous Clear	163	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔
8-Bit Counters/Dividers with 1-of-8 Decoded Outputs	4022					✔							
8-Bit with 3-State Output Registers	590								✔		✔		
8-Bit with Input Registers	592										✔		
8-Bit with Input Registers and Parallel Counter Outputs	593										✔		
8-Bit Synchronous Up/Down	867			✔	✔								
	869			✔	✔								
8 Bit Presettable Synchronous Down	40103					✔			✔	✔			
7-Stage Ripple-Carry Counters/Dividers	4024					✔			✔	✔			
12-Stage Ripple-Carry Counters/Dividers	4040					✔			✔	✔		✔	

MSI功能元件——计数器

二进制计数器（续）

✔ Product available in technology indicated　+ New product planned in technology indicated
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DESCRIPTION	TYPE	TECHNOLOGY											
		AC	ACT	ALS	AS	CD4K	F	FCT	HC	HCT	LS	LV-A	S
14-Stage Ripple-Carry Counters/Dividers with Oscillators	4020					✔			✔	✔			
	4060					✔			✔	✔			
21-Stage	4045					✔							
Divide by 12	92										✔		
Divide by N	4018					✔							
Dual 16-Bit with Output Registers	8154											✔	
Programmable Divide by N	4059					✔			✔				
Presettable Up/Down or BCD Decade	4029					✔							

十进制计数器

DESCRIPTION	TYPE	TECHNOLOGY			
		CD4K	HC	HCT	LS
Divide by 2, Divide by 5	90				✔
Dual Divide by 2, Divide by 5	390		✔	✔	✔
Synchronous Presettable BCD Up/Down	190		✔		
	192		✔		
Counters/Dividers with 1-of-10 Decoded Outputs	4017	✔	✔		
Counters/Drivers with Decoded 7-Segment Display Outputs	4026	✔			
	4033	✔			
BCD-to-Decimal Decoders	4028	✔			
Presettable BCD Up/Down	4510	✔			
Dual BCD Up	4518	✔	✔		
Programmable BCD Divide by N 4522	4522	✔			
2-Decade Synchronous Presettable BCD Down 40102	40102	✔			
Up-Down Counters/Latches/7-Segment Display Drivers 40110	40110	✔			
Presettable BCD-Type Up/Down with Dual Clock and Reset 40192	40192	✔			

MSI功能元件——解码器、编码器和多路复用器

✔ Product available in technology indicated + New product planned in technology indicated

OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

数据选择器/多路复用器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																		
			ABT	AC	ACT	AHC	AHCT	ALS	AS	AUC	CD4K	F	FCT	HC	HCT	LS	LV-A	LVC	PCA	S	TTL
Single 2-to-1 Line	PP	2G157																✔			
1-of-8 Analog Multiplexers/Demultiplexers	PP	4051												✔	✔		✔				
1-of-8 Analog Multiplexers/Demultiplexers with Logic Level Conversion	PP	4051									✔										
1-of-8 Analog Multiplexers/Demultiplexers with Latches	PP	4351												✔	✔						
1-of-8 Data Selectors	3S	4512									✔										
1-of-8	PP	151		✔	✔			✔	✔			✔		✔	✔	✔				✔	
	3S	251		✔				✔				✔		✔	✔	✔					
1-of-8 Data Selectors/Multiplexers/Registers	3S	354												✔	✔						
		356													✔						
1-of-8 Differential Analog Multiplexers/Demultiplexers	PP	4097									✔										
1-of-16 Analog Multiplexers/Demultiplexers	PP	4067									✔			✔	✔						
1-of-16	PP	150																			✔
1-of-16 Data Generators/Multiplexers	3S	250							✔												
Dual 1-of-4	PP	153		✔	✔			✔	✔			✔		✔	✔	✔					
	3S	253		✔	✔			✔	✔			✔		✔	✔	✔					
Dual Analog Multiplexers/Demultiplexers	PP	2G53								✔								✔			
Dual 1-of-4 Analog Multiplexers/Demultiplexers	PP	4052									✔										
Dual 1-of-4 Analog Multiplexers/Demultiplexers with Logic Level Conversion	PP	4052												✔	✔		✔				
Dual 1-of-4 Analog Multiplexers/Demultiplexers with Latches	PP	4352												✔							
Triple 1-of-2 Analog Multiplexers/Demultiplexers	PP	4053												✔	✔		✔				
Triple 1-of-2 Analog Multiplexers/Demultiplexers with Logic Level Conversion	PP	4053									✔										

MSI功能元件——解码器、编码器和多路复用器

数据选择器/多路复用器（续）

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																		
			ABT	AC	ACT	AHC	AHCT	ALS	AS	AUC	CD4K	F	FCT	HC	HCT	LS	LV-A	LVC	PCA	S	TTL
Quad 1-of-2	3S	257		✔	✔			✔	✔			✔	✔	✔	✔	✔		✔		✔	
	PP	258			✔			✔	✔			✔		✔	✔	✔					
	CP/3S	11257		✔	✔																
Quad 1-of-2 with Series Damping Resistors	3S	2257											✔								
Quad 2-to-1	PP	157		✔	✔	✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔		✔	
	3S	40257									✔										
Quad 2-to-1 with Storage	PP	298							✔							✔					
		399											✔			✔					
Quad 2-to-4	PP	158		✔	✔	✔	✔	✔	✔					✔	✔	✔					
Hex 2-to-1 Universal Multiplexers	3S	857						✔													
4-to-1 Multiplexers/Demultiplexers	3S	16460	✔																		
Nonvolatile 5-Bit Registers with I^2C Interface	PP	8550																	✔		

MSI功能元件——解码器、编码器和多路复用器

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

解码器/多路信号分离器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																		
			AC	ACT	AHC	AHCT	ALS	AS	AUC	BCT	CD4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	S	TTL
1-of-2	PP	1G19							✔										✔		
1-of-2 Noninverting Demultiplexers	3S	1G18																	✔		
2-of-3	PP	1G29																	✔		
2-to-4 Line Decoders	PP	1G139																	✔		
Dual 2-to-4 Line	PP	139	✔	✔	✔	✔	✔							✔	✔	✔	✔		✔	✔	
	CP	11139		✔																	
	PP	155														✔					
	OC	156					✔									✔					
Dual 2-Line to 4-Line Memory Decoders with On-Chip Supply-Voltage Monitors	PP	2414								✔											
Dual Binary 1-of-4	PP	4555									✔										
		4556									✔										
3-to-8 Line	PP	238	✔	✔										✔	✔						
3-to-8 Line Inverting	PP	138	✔	✔	✔	✔	✔	✔				✔	✔	✔	✔	✔	✔	✔	✔	✔	
	CP	11138	✔																		
3-to-8 Line with Address Latches	3S	137					✔							✔	✔						
		237												✔	✔						
4-Bit Latch/4 to 16 Line	PP	4514									✔			✔	✔						
		4515									✔			✔	✔						
4-to-16 Line	PP	154												✔	✔						✔
	OC	159																			✔
BCD-to-Decimal or Binary-to-Octal Decoders/Drivers	PP	4028									✔										
BCD to Decimal Decoders/Drivers	OC	45																			✔
		145														✔					✔

MSI功能元件——解码器、编码器和多路复用器

解码器/多路信号分离器（续）

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector *CP = center pin* *OD = open drain* *PP = push-pull* *3S = 3-state*

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY																		
			AC	ACT	AHC	AHCT	ALS	AS	AUC	BCT	CD4K	F	FCT	HC	HCT	LS	LV-A	LV-AT	LVC	S	TTL
BCD to 7-Segment Decoders/Drivers	OC	47														✔					✔
		247														✔					
BCD to 7-Segment Latches/Decoders/Drivers	PP	4511									✔			✔	✔						
BCD to 7-Segment LCD Decoders/Drivers with Display-Frequency Outputs	PP	4055									✔										
BCD to 7-Segment LCD Decoders/Drivers with Strobed Latch Function	PP	4056									✔										
BCD to 7-Segment Latches/Decoders/Drivers for LCDs	PP	4543									✔			✔	✔						
BCD to 10-Line Decimal	PP	42												✔	✔	✔					

优先级编码器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY			
			CD4K	HC	HCT	LS
8-to-3 Line	PP	148		✔		✔
	3S	348				✔
	PP	4532	✔			
10-to-4 Line	PP	147		✔	✔	
10-to-4 Line BCD	PP	40147	✔			

MSI功能元件——数字比较器

地址/等值/幅度比较器

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY							
			ALS	AS	CD4K	F	HC	HCT	LS	S
4-Bit Magnitude	PP	4063			✔					
		4585			✔					
		85					✔	✔	✔	✔
8-Bit Identity (P = Q) with Enable and 20 - Pullup Resistors on Q Inputs	OC	518	✔							
8-Bit Identity ($\overline{P = Q}$) with Enable and 20 - Pullup Resistors on Q Inputs	PP	520	✔							
8-Bit Identity ($\overline{P = Q}$) with Enable	PP	521	✔			✔				
	PP	688	✔							
8-Bit Magnitude (P > Q, P < Q) with Latched Inputs and Logical or Arithmetic Comparison	PP	885		✔						
8-Bit Magnitude ($\overline{P = Q}$, $\overline{P > Q}$) and 100K - Pullup Resistors on Q Inputs	PP	682					✔			
8-Bit Magnitude ($\overline{P = Q}$, $\overline{P > Q}$) and 20K - Pullup Resistors on Q Inputs	PP	682							✔	
8-Bit Magnitude ($\overline{P = Q}$, $\overline{P > Q}$)	PP	684					✔			
8-Bit Magnitude ($\overline{P = Q}$, $\overline{P > Q}$) with Enable	PP	684							✔	
8-Bit Magnitude (P = Q) with Enable	PP	688					✔	✔		
8-Bit Magnitude/Identity ($\overline{P = Q}$) with Enable	PP	688							✔	
12-Bit Address with Output Enable	PP	679	✔							

信号开关

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

模拟开关和多路复用器

DESCRIPTION	TYPE	TECHNOLOGY						
		AHC	AUC	CD4K	HC	HCT	LV-A	LVC
Single Switches	1G66		✔					✔
Dual Switches	2G66		✔					✔
Dual 4-Channel Multiplexers/Demultiplexers	4052				✔	✔	✔	
Dual 4-Channel Multiplexers/Demultiplexers with Injection-Current Effect Control	4852				✔			
Dual 4-Channel Multiplexers/Demultiplexers with Latches	4352				✔			
Dual 4-Channel Multiplexers/Demultiplexers with Logic-Level Conversion	4052			✔				
Triple 2-Channel Multiplexers/Demultiplexers	4053				✔	✔	✔	
Triple 2-Channel Multiplexers/Demultiplexers with Logic-Level Conversion	4053			✔				
Quadruple Switches	4066	✔		✔	✔		✔	
Quadruple Switches with Level Translation	4316				✔	✔		
8-Channel Multiplexers/Demultiplexers	4051				✔	✔	✔	
	4097			✔				
8-Channel Multiplexers/Demultiplexers with Injection-Current Effect Control	4851				✔			
8-Channel Multiplexers/Demultiplexers with Latches	4651				✔	✔		
8-Channel Analog Multiplexers/Demultiplexers with Latches	4351				✔	✔		
8-Channel Multiplexers/Demultiplexers with Logic-Level Conversion	4051			✔				
16-Channel Multiplexers/Demultiplexers	4067			✔	✔	✔		
SPDT Switches	1G3157							✔
SPDT Switches or 2:1 Multiplexers/Demultiplexers	2G53		✔					✔

信号开关

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

数字总线交换器/多路复用开关

DESCRIPTION	TYPE	TECHNOLOGY				
		CB3Q	CB3T	CBT	CBT-C	CBTLV
1-of-8 FET Multiplexers/Demultiplexers	3251	✔		✔		✔
Dual 1-of-4 FET Multiplexers/Demultiplexers	3253	✔	✔	✔	✔	✔
4-Bit 1-of-2 FET Multiplexers/Demultiplexers	3257	✔	✔	✔	✔	✔
10-Bit FET Bus-Exchange Switches	3383		✔	✔	✔	✔
12-Bit 1-of-2 FET Multiplexers/Demultiplexers with Internal Pulldown Resistors	16292			✔		✔
	162292			✔		
12-Bit 1-of-2 FET Multiplexers/Demultiplexers with Internal Pulldown Resistors and Series Damping Resistors	16292					✔
12-Bit 1-of-3 FET Multiplexers/Demultiplexers	16214			✔	✔	
Synchronous 16-Bit 1-of-2 FET Multiplexers/Demultiplexers	16232			✔		
16-Bit 1-of-2 FET Multiplexers/Demultiplexers	16233			✔		
16-Bit to 32-Bit FET Multiplexer/Demultiplexer Bus Switches	16390			✔		
18-Bit FET Bus-Exchange Switches	16209			✔		
24-Bit FET Bus-Exchange Switches	16212		✔	✔		✔
	16213			✔		
24-Bit FET Bus-Exchange Switches with Schottky Diode Clamping	16212			✔		

信号开关

数字总线开关

✔ *Product available in technology indicated* + *New product planned in technology indicated*
OC = open collector *CP = center pin* *OD = open drain* *PP = push-pull* *3S = 3-state*

DESCRIPTION	TYPE	TECHNOLOGY							
		CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	HC	HCT
Single FET	1G125			✔		✔			
	1G384			✔					
Single FET with Level Shifting	1G125		✔	✔					
	1G384			✔					
Dual FET	3305	✔			✔				
	3306	✔	✔	✔	✔				
Dual FET with Level Shifting	16211				✔				
	3306			✔	✔				
Dual FET with Schottky Diode Clamping	3306			✔					
Quad Bilateral	4016						✔	✔	
Quad FET	3125	✔	✔	✔	✔	✔			
	3126			✔		✔			
Octal FET	3244			✔	✔				
	3245	✔	✔	✔	✔	✔			
	3345			✔		✔			
Octal 5 V with Precharged Outputs and Undershoot Protection	6845					✔			
10-Bit FET	3384				✔				
	3861			✔					
10-Bit FET with Internal Pulldown Resistors	3857			✔					
10-Bit FET with Level Shifting	3384			✔					
	3861			✔					
10-Bit FET with Precharged Outputs and Diode Clamping	6800			✔					
10-Bit FET with Precharged Outputs and Active Clamp Undershoot Protection	6800	✔		✔	✔				
10-Bit FET with Precharged Outputs for Live Insertion	6800			✔					
10-Bit FET with Schottky Diode Clamping	3384	✔		✔					
16-Bit FET	16244	✔		✔	✔				
	16245	✔		✔	✔				
16-Bit FET with Active Clamp Undershoot Protection	16245			✔					

信号开关

✔ *Product available in technology indicated* + *New product planned in technology indicated*

OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

数字总线开关（续）

DESCRIPTION	TYPE	TECHNOLOGY							
		CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	HC	HCT
20-Bit FET	16210	✔	✔	✔	✔	✔			
	16861			✔					
20-Bit FET with Active Clamp Undershoot Protection	16861			✔					
20-Bit FET with Level Shifting	16210			✔					
20-Bit FET with Precharged Outputs	16800				✔	✔			
24-Bit FET	16211	✔	✔	✔	✔	✔			
24-Bit FET with Bus Hold	16211			✔					
24-Bit FET with Level Shifting	16211			✔					
24-Bit FET with Precharged Outputs	16811	✔			✔				
24-Bit FET with Schottky Diode Clamping	16211			✔					
32-Bit FET	34X245			✔					
	32245			✔					
32-Bit FET with Active Clamp Undershoot Protection	32245	✔		✔					

背板逻辑器件

DESCRIPTION	TYPE	TECHNOLOGY				
		ABTE	FB	GTL	GTLP	VME
1:6/1:2 GTLP-to-LVTTL Fanout Drivers	817				✔	
Dual 1-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Bus Transceivers with Split LVTTL Port, Feedback Path, and Selectable Polarity	1395				✔	
	21395				✔	
2-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Bus Transceivers with Selectable Polarity	1394				✔	
7-Bit TTL/BTL Transceivers (IEEE Std 1194.1)	2041		✔			
8-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Registered Transceivers with Split LVTTL Port and Feedback Path	22033				✔	
	2034				✔	
	22034				✔	
8-Bit LVTTL-to-GTLP Bus Transceivers with Bus Hold	306				✔	
8-Bit TTL/BTL Registered Transceivers (IEEE Std 1194.1)	2033		✔		✔	
8-Bit TTL/BTL Transceivers (IEEE Std 1194.1)	2040		✔			

特殊逻辑器件

总线终端阵列和网络

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	TYPE	TECHNOLOGY				
		ABTE	FB	GTL	GTLP	VME
8-Bit Universal Bus Transceivers and Two 1-Bit Bus Transceivers with 3-State Outputs	22501					✔
9-Bit TTL/BTL Address/Data Transceivers (IEEE Std 1194.1)	2031		✔			
11-Bit Incident Wave Switching Bus Transceivers with 3-State and Open-Collector Outputs	16246	✔				
16-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Bus Transceivers with Bus Hold	1645				✔	
16-Bit LVTTL-to-GTL/GTL+ Universal Bus Transceivers with Live Insertion	1655			✔		
16-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Universal Bus Transceivers with Bus Hold	1655				✔	
16-Bit Incident Wave Switching Bus Transceivers with 3-State Outputs	16245	✔				
16-Bit LVTTL-to-GTLP Bus Transceivers with Bus Hold	16945				✔	
17-Bit LVTTL-to-GTL/GTL+ Universal Bus Transceivers with Buffered Clock Outputs	16616			✔		
17-Bit LVTTL-to-GTLP Universal Bus Transceivers with Buffered Clock and Bus Hold	16916				✔	
17-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Universal Bus Transceivers with Buffered Clock and Bus Hold	1616				✔	
17-Bit TTL/BTL Universal Storage Transceivers with Buffered Clock Lines (IEEE Std 1194.1)	1651		✔			
17-Bit LVTTL/BTL Universal Storage Transceivers with Buffered Clock Lines (IEEE Std 1194.1)	1653		✔			
18-Bit TTL/BTL Universal Storage Transceivers (IEEE Std 1194.1)	1650		✔			
18-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Universal Bus Transceivers with Bus Hold	1612				✔	
18-Bit LVTTL-to-GTL/GTL+ Universal Bus Transceivers	16612			✔		
18-Bit LVTTL-to-GTLP Universal Bus Transceivers with Bus Hold	16612				✔	
	16912				✔	
18-Bit LVTTL-to-GTL/GTL+ Bus Transceivers	16622			✔		
	16923			✔		
18-Bit LVTTL-to-GTLP Bus Transceivers with Source-Synchronous Clock Outputs and Bus Hold	1627				✔	
	16927				✔	
32-Bit LVTTL-to-GTLP Adjustable-Edge-Rate Bus Transceivers with Bus Hold	3245				✔	
32-Bit LVTTL-to-GTLP Bus Transceivers with Bus Hold	32945				✔	
34-Bit LVTTL-to-GTLP Universal Bus Transceivers with Bus Hold	32916				✔	
36-Bit LVTTL-to-GTLP Universal Bus Transceivers with Bus Hold	32912				✔	

特殊逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
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边界扫描 (JTAG) 总线器件

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			ABT	BCT	LVT
Scan Test Devices with Octal Buffers	3S	8240		✔	
		8244		✔	
Scan Test Devices with Octal Bus Transceivers and Registers	3S	8646	✔		
		8652		✔	
Scan Test Devices with Octal D-Type Latches	3S	8373		✔	
Scan Test Devices with Octal D-Type Edge-Triggered Flip-Flops	3S	8374	✔		
Scan Test Devices with Octal Registered Bus Transceivers	PP	8543	✔		
		8952	✔		
Scan Test Devices with Octal Transceivers	3S	8245	✔	✔	
Scan Test Devices with 18-Bit Bus Transceivers	PP	18245	✔		
Scan Test Devices with 18-Bit Inverting Bus Transceivers	PP	18640	✔		
Scan Test Devices with 18-Bit Transceivers and Registers	3S	18646	✔		✔
		182646	✔		✔
		18652	✔		✔
		182652	✔		✔
Scan Test Devices with 18-Bit Universal Bus Transceivers	3S	18502	✔		✔
		182502	✔		✔
		18511			✔
		18512			✔
		182512			✔
Scan Test Devices with 20-Bit Universal Bus Transceivers	3S	18504	✔		✔
		182504	✔		✔
		18514			✔

特殊逻辑器件

边界扫描 (JTAG) 支持器件

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			ACT	ACT	LVT
Embedded Test Bus Controllers with 8-Bit Generic Host Interfaces	3S	8980			✔
Test Bus Controllers IEEE Std 1149.1 (JTAG) TAP Masters with 16-Bit Generic Host Interfaces	3S	8990		✔	
10-Bit Addressable Scan Ports Multidrop-Addressable IEEE Std 1149.1 (JTAG) TAP Transceivers	PP	8996	✔		✔
10-Bit Linking Addressable IEEE Std 1149.1 (JTAG) TAP Transceivers	3S	8986			✔
Scan-Path Linkers with 4-Bit Identification Buses Scan-Controlled IEEE Std 1149.1 (JTAG) TAP Concatenators	3S	8997		✔	

总线终端阵列和网络

DESCRIPTION	TYPE	TECHNOLOGY			
		ACT	CD4K	F	S
Dual 4-Bit Programmable Terminators	40117		✔		
8-Bit Schottky Barrier Diode Bus-Termination Arrays	1056			✔	
10-Bit Bus-Termination Networks with Bus Hold	1071	✔			
12-Bit Schottky Barrier Diode Bus-Termination Arrays	1050				✔
	1051				✔
16-Bit Bus-Termination Networks with Bus Hold	1073	✔			
16-Bit Schottky Barrier Diode Bus-Termination Arrays	1052				✔
	1053				✔
16-Bit Schottky Barrier Diode R-C Bus-Termination Arrays	1016			✔	

DIMM存储器驱动器和收发器

DESCRIPTION	TYPE	TECHNOLOGY
		HSTL
9-Bit to 18-Bit HSTL-to-LVTTL Memory Address Latches	16918	✔
9-Bit to 18-Bit HSTL-to-LVTTL Memory Address Latches with Input Pullup Resistors	16919	✔
14-Bit to 28-Bit HSTL-to-LVTTL Memory Address Latches	162822	✔

特殊逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

同步FIFO存储器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY							
			ABT	ACT	ALS	ALVC	CD4K	HC	HCT	S
16 □ 4	3S	232			✔					
		40105					✔	✔	✔	
16 □ 5	3S	225								✔
		229			✔					
64 □ 4	3S	236			✔					
64 □ 18	3S	7814		✔						
64 □ 18 3.3-V	3S	7814				✔				
256 □ 18	3S	7806		✔						
256 □ 18 3.3-V	3S	7806				✔				
512 □ 18	3S	7804		✔						
512 □ 18 3.3-V	3S	7804				✔				
512 □ 18 □ 2 Bidirectional	3S	7820	✔							
1024 □ 9 □ 2 Bidirectional	3S	2235		✔						
1024 □ 18	3S	7802		✔						
2048 □ 9	3S	7808		✔						

Synchronous FIFO Memories

DESCRIPTION	OUTPUT	TYPE		TECHNOLOGY		
			ABT	ACT	ALVC	V
64 □ 1 □ 2 Independent	3S	2226		✔		
		2227		✔		
64 □ 18	3S	7813		✔		
64 □ 18 3.3-V	3S	7813			✔	
64 □ 36 □ 2 Bidirectional	3S	3612	✔			
		3614	✔			
256 □ 1 □ 2 Independent	3S	2228		✔		
		2229		✔		
256 □ 18	3S	7805		✔		
256 □ 18 3.3-V	3S	7805			✔	

特殊逻辑器件

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

同步FIFO存储器（续）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY			
			ABT	ACT	ALVC	V
256 □ 36 □ 2 Bidirectional	3S	3622		✔		
512 □ 18	3S	7803		✔		
512 □ 18 3.0-V	3S	215				✔
		7803			✔	
512 □ 18 □ 2 Bidirectional	3S	7819	✔			
512 □ 36	3S	3631		✔		
512 □ 36 □ 2 Bidirectional	3S	3632		✔		
1024 □ 18	3S	7801		✔		
		7811		✔		
		7881		✔		
1024 □ 18 3.3-V	3S	225				✔
1024 □ 36	3S	3641		✔		
1024 □ 36 3.3-V	3S	3640				✔
2048 □ 9	3S	7807		✔		
2048 □ 18	3S	7882		✔		
2048 □ 18 3.3-V	3S	235				✔
2048 □ 36	3S	3651		✔		
2048 □ 36 3.3-V	3S	3650			✔	
		3651				✔
4096 □ 18 3.3-V	3S	245				✔
4096 □ 36 3.3-V	3S	3660				✔
8192 □ 18 or 16384 □ 9 3.3-V	3S	263				✔
8192 □ 36 3.3-V	3S	3670				✔
16384 □ 18 or 32768 □ 9 3.3-V	3S	273				✔
16384 □ 36 3.3-V	3S	3680				✔
32768 □ 18 or 65536 □ 9 3.3-V	3S	283				✔
32768 □ 36 3.3-V	3S	3680				✔
65536 □ 18 or 131072 □ 9 3.3-V	3S	293				✔

特殊逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

IEEE标准1284（并行端口接口）

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			ACT	LV	LVC
7-Bit Bus Interfaces	3S	1284	✔		
19-Bit Bus Interfaces	OD/PP	161284		✔	✔
19-Bit Translation Transceivers with Error-Free Power Up	OD/PP	E161284			✔
	OD/PP	Z161284			✔

各种各样的门和延迟元件

DESCRIPTION	TYPE	TECHNOLOGY	
		CD4K	LS
Hex Delay Elements for Generating Delay Lines	31		✔
Dual Complementary Pairs Plus Inverters	4007	✔	
Hex Gates (Four Inverters, One 2-Input NOR, One 2-Input NAND)	4572	✔	

????????????

DESCRIPTION	TYPE	TECHNOLOGY								
		AHC	AHCT	CD4K	HC	HCT	LS	LV-A	LVC	TTL
Lo w Power Monostable/Astable	4047			✔						
Monostable Multivibrators with Schmitt-Trigger Inputs	121									✔
Retriggerable	122						✔			
Single Retriggerable with Schmitt-Trigger Inputs	1G123								✔	
Dual	4098			✔						
Dual with Schmitt-Trigger Inputs	221				✔	✔	✔	✔		✔
Dual Precision	14538			✔						
Dual Retriggerable with Reset	123	✔	✔		✔	✔	✔	✔		✔
	423				✔	✔	✔			
Dual Retriggerable Precision	4538				✔	✔				

特殊逻辑器件

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

PLL

DESCRIPTION	TYPE	TECHNOLOGY					
		ACT	CD4K	HC	HCT	LS	LV-A
Digital PLLs	297	✔		✔	✔	✔	
PLLs with VCO	4046		✔	✔	✔		✔
PLLs with VCO and Lock Detectors	7046			✔	✔		

振荡器

DESCRIPTION	TYPE	TECHNOLOGY	
		LS	S
Single Voltage-Controlled	624	✔	
	628	✔	
Dual Voltage-Controlled	124		✔
	629	✔	

比率乘法器和分频器/定时器

DESCRIPTION	TYPE	TECHNOLOGY		
		CD4K	LS	TTL
4-Bit Binary Rate Multipliers	4089	✔		
BCD Rate Multipliers	4527	✔		
Synchronous 6-Bit Binary Rate Multipliers	97			✔
24-Stage Frequency Dividers	4521	✔		
Programmable Frequency Dividers/Digital Timers	292		✔	
	294		✔	
Programmable Timers	4536	✔		
	4541	✔		

通用总线功能元件

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

通用总线驱动器 (UBD)

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			ALVC	AVC	LVT
12-Bit with Parity Checker and Dual 3-State Outputs	3S	16903	✔		
16-Bit Quad 2 Input	3S	16334	✔	✔	
		162334	✔		
18-Bit	3S	16834	✔	✔	
		162834	✔		
		16835	✔	✔	✔
		162835	✔		
20-Bit	3S	162836	✔		

通用总线交换器 (UBE)

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY		
			ABT	ALVC	AVC
9-Bit 4-Port	3S	16409		✔	
		162409		✔	
12-Bit to 24-Bit Multiplexed	3S	16271		✔	
12-Bit to 24-Bit Registered	3S	16269		✔	✔
		16270		✔	
		162268		✔	
16-Bit to 32-Bit with Byte Masks	3S	162280		✔	
16-Bit Tri-Port	3S	32316	✔		
18-Bit to 36-Bit Registered	3S	16282		✔	
		162282		✔	
18-Bit Tri-Port	3S	32318	✔		

通用总线功能元件

✔ Product available in technology indicated　+ New product planned in technology indicated
OC = open collector　CP = center pin　OD = open drain　PP = push-pull　3S = 3-state

通用总线收发器 (UBT)

DESCRIPTION	TYPE	TYPE	TECHNOLOGY								
			ABT	ALVC	ALVT	FCT	GTL	GTLP	LVC	LVT	VME
8-Bit and Two 1-Bit Split Outputs with Feedback Path	3S	22501									✔
16-Bit LVTTL-to-GTL/GTL+ with Live Insertion	3S	1655					✔				
16-Bit LVTTL-to-GTLP Adjustable-Edge-Rate	3S	1655						✔			
17-Bit LVTTL-to-GTLP Adjustable-Edge-Rate with Buffered Clock Outputs and Bus Hold	3S	1616						✔			
17-Bit LVTTL-to-GTL/GTL+	3S	16616					✔				
17-Bit LVTTL-to-GTLP with Buffered Clock	3S	16916						✔			
18-Bit	3S	16500	✔	✔		✔				✔	
		162500	✔			✔					
		16501	✔	✔		✔				✔	
		162501	✔			✔					
		16600	✔	✔							
		16601	✔	✔	✔						
		162601	✔	✔							
18-Bit with Boundary Scan	3S	18511								✔	
18-Bit with Parity Generators/Checkers	3S	16901		✔					✔		
18-Bit LVTTL-to-GTL/GTL+	3S	16612					✔				
18-BitLVTTL-to-GTLPwithBusHold	3S	16612						✔			
		16912						✔			
18-Bit LVTTL-to-GTLP Adjustable-Edge-Rate with Bus Hold	3S	1612						✔			
32-Bit	3S	32501	✔	✔							

专用产品[CompactFlash™、SD卡、多媒体卡 (MMC) I²C]

DESCRIPTION	TYPE	TECHNOLOGY		
		AVC	LV-A	TXS
Voltage-Translation Transceivers for MMCs, SD Cards, Memory Stick-Compliant Products, SmartMedia Cards and xD-Picture Cards™	A406	✔		
Voltage-Translation Transceivers for MMCs, SD Cards and Memory Stick-Compliant Products	A406L	✔		
Low-Power, Dual-Supply, Level-Translating CompactFlash Interfaces with 16-Bit Data, 11-Bit Address	4320		✔	
Voltage-Translation Transceiver for MMC, SD Cards, and Memory Stick-Compliant Products with EMI Filter and IEC-Level ESD Protection	A406E	✔		
Comparator with Output Voltage-Level Translation	TXS03121			✔
Directionless Voltage-Translation Transceiver for MMC, SD Cards and Memory Stick-Compliant Products with EMI Filter and IEC-Level ESD Protection	TXS0206			✔
SDIO Port Expander with Voltage-Translation Transceiver	TXS02612			✔

通用总线功能元件

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

双电源转换器

DESCRIPTION		TYPE	ALVC	AVC	CD4K	LVC
Single Bus Transceivers	Translate Between 1.2 V to 3.6 V	1T45		✔		
	Translate Between 1.65 V to 5.5 V	1T45				✔
Dual Bus Transceivers	Translate Between 1.2 V to 3.6 V	2T45		✔		
	Translate Between 1.65 V to 5.5 V	2T45		✔		✔
	Two DIR Pins to Translate Between 1.2 V to 3.6 V	2T245		✔		
Quad Bus Transceivers	Two DIR Pins to Translate Between 1.2 V to 3.6 V	4T245		✔		
	Four DIR Pins to Translate Between 1.2 V to 3.6 V	4T774		✔		
Six Channel Bus Transceivers	Translate Between 1.2 V to 3.6 V	6T245		✔		
Octal Bus Transceivers	Translate Between 1.4 V to 3.6 V	8T245				✔
	Translate Between 1.6 V to 5.5 V	8T245				✔
	Translate Between 2.3 V to 3.6 V and 3 V to 5.5 V	C3245				✔
	Translate Between 2.7 V to 3.6 V and 4.5 V to 5.5 V	4245				✔
	Translate Between 2.7 V to 5.5 V and 4.5 V to 5.5 V	C4245		✔		
16-Bit Bus Transceivers	Translate Between 1.4 V to 3.6 V	A164245		✔		
	Translate Between 1.4 V to 3.6 V and 1.2 V to 3.6 V	B164245		✔		
	Translate Between 1.65 V to 5.5 V	16T245				✔
	Translate Between 2.5 V to 3.3 V and 3.5 V to 5 V	164245	✔			
20-Bit Bus Transceivers	Translate Between 1.4 V to 3.6 V and 1.2 V to 3.6 V	20T245		✔		
24-Bit Bus Transceivers	Translate Between 1.4 V to 3.6 V and 1.2 V to 3.6 V	24T245		✔		
32-Bit Bus Transceivers	Translate Between 1.4 V to 3.6 V	B324245		✔		
	Translate Between 1.4 V to 3.6 V and 1.2 V to 3.6 V	32T245		✔		

电压电平转换

✔ Product available in technology indicated   + New product planned in technology indicated
OC = open collector   CP = center pin   OD = open drain   PP = push-pull   3S = 3-state

ECL/TTL转换器

DESCRIPTION	OUTPUT	TYPE	TECHNOLOGY
			ECL
Octal	3S	10KHT5541	✔
Octal with Edge-Triggered D-Type Flip-Flops	3S	10KHT5574	✔
Octal TTL-to-ECL with Edge-Triggered D-Type Flip-Flops and Output Enable	PP	10KHT5578	✔
Octal TTL-to-ECL with Output	PP	10KHT5542	✔
		10KHT5543	✔

GTL/TTL转换器

DESCRIPTION	TYPE	TECHNOLOGY
		GTL
10-Bit Voltage Clamp	2010	✔
12-Bit GTL–/GTL/GTL+ to LVTTL	2007	✔
	2107	✔
13-Bit GTL–/GTL/GTL+ to LVTTL	2006	✔
Voltage Translators	1T57	✔
	1T58	✔
	1T97	✔
	1T98	✔

双电源自动方向检测转换器

DESCRIPTION	TYPE	TXB	TXS
Single-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXB0101	✔	
Single-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXS0101		✔
Dual-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXB0102	✔	
Dual-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXS0102		✔
Quad-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXB0104	✔	
Quad-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXS0104E		✔
Six-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXB0106	✔	
Octal-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXB0108	✔	
Octal-Bit Bidirectional Translation Between 1.2 V to 3.6 V and 1.65 V to 5.5 V	TXS0108E		✔

电压电平转换

✔ Product available in technology indicated + New product planned in technology indicated
OC = open collector CP = center pin OD = open drain PP = push-pull 3S = 3-state

转换总线开关

DESCRIPTION	TYPE	TECHNOLOGY			
		CB3T	CBT	CBTC	TVC
Single FET 2.5-V/3.3-V Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	1G125	✔			
Single FET Bus Switches with Level Shifting	D1G125		✔		
	D1G384		✔		
Dual FET Bus Switches with Level Shifting	D3306		✔		
Dual FET Bus Switches with Level Shifting and –2-V Undershoot Protection	D3305			✔	
	D3306			✔	
Dual Bus Switch Voltage Translators	3306	✔			
Dual 1-of-4 FET Multiplexers/Demultiplexers 2.5-V/3.3-V Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	3253	✔			
Dual Voltage Clamps	3306				✔
4-Bit 1-of-2 FET Multiplexing/Demultiplexing Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	3257	✔			
Quad FET Bus Switches with 5-V-Tolerant Level Shifters	3125	✔			
8-Bit FET Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	3245	✔			
10-Bit FET Bus Switches with Level Shifting	D3384		✔		
	D3861		✔		
10-Bit FET Bus Switches with Level Shifting and –2-V Undershoot Protection	D3384			✔	
10-Bit FET 2.5-V/3.3-V Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	3384	✔			
10-Bit Voltage Clamps	3010				✔
20-Bit FET Bus Switches with Level Shifting	D16210		✔		
20-Bit FET 2.5-V/3.3-V Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	16210	✔			
22-Bit Voltage Clamps	16222				✔
24-Bit FET Bus Switches with Level Shifting	D16211		✔		
24-Bit FET 2.5-V/3.3-V Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	16211	✔			
24-Bit FET Bus-Exchange Low-Voltage Bus Switches with 5-V-Tolerant Level Shifters	16212	✔			

1G00～1G97

✔ Product available in technology indicated　　+ New product planned in technology indicated

	BiCMOS						BIPOLAR						CMOS																				OTHER									
DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
1G00															✔	✔		✔	✔												✔											
1G02															✔	✔		✔	✔												✔											
1G04															✔	✔		✔	✔												✔											
1GU04															✔			✔	✔												✔											
1GX04																															✔											
1G06																		✔	✔												✔											
1G07																		✔	✔												✔											
1G08															✔	✔		✔	✔												✔											
1G0832																			+												✔											
1G10																			+												✔											
1G 11																			+												✔											
1G14															✔	✔		✔	✔												✔											
1G17																		✔	✔												✔											
1G18																			+												✔											
1G19																		✔	+												✔											
1G27																			+												✔											
1G29																			+												✔											
1G32															✔	✔		✔	✔												✔											
1G34																			✔												✔											
1G38																			+												✔											
1G57																			✔												✔											
1G58																			✔												✔											
1G66																		✔													✔											
1G74																		✔	✔																							
1G79																		✔	✔												✔											
1G80																		✔	✔												✔											
1G86																		✔	+												✔											
1G97															✔	✔		✔	✔												✔											

1G98～2G14

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
1G98																			✔												✔											
1G99																			✔												✔											
1G123																															✔											
1G125															✔	✔		✔	✔			✔	✔		✔						✔											
1G126															✔	✔		✔	✔												✔											
1G139																															✔											
1G240																		✔	+												✔											
1G244																		✔																								
1G245																		✔																								
1G332																			+												✔											
1G373																															✔											
1G374																															✔											
1G384																							✔																			
1G386																			+												✔											
1G3157																															✔											
1G3208																			+												✔											
1T45																				✔											✔											
1T57																			✔																							
1T58																			✔																							
1T97																			✔																							
1T98																			✔																							
2G00																		✔	+												✔											
2G02																		✔	+												✔											
2G04																		✔	+												✔											
2GU04																		✔													✔											
2G06																		✔	+												✔											
2G07																		✔	+												✔											
2G08																		✔	+												✔											
2G14																			+												✔											

2G17～32T245

✔ Product available in technology indicated + New product planned in technology indicated

	BiCMOS						BIPOLAR						CMOS																				OTHER									
DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
2G17																			+												✔											
2G32																		✔	+												✔											
2G34																		✔	+												✔											
2G38																			+												✔											
2G53																		✔													✔											
2G66																		✔													✔											
2G74																															✔											
2G79																		✔	+												✔											
2G80																		✔	+												✔											
2G86																		✔	+												✔											
2G125																		✔	✔												✔											
2G126																		✔	✔												✔											
2G132																			+												✔											
2G157																			+												✔											
2G240																		✔	✔												✔											
2G241																		✔	+												✔											
2T45																				✔											✔											
3G04																			+												✔											
3GU04																															✔											
3G06																			+												✔											
3G07																			+												✔											
3G14																			+												✔											
3G17																			+												✔											
3G34																			+												✔											
8T245																				✔											✔											
16T245																				✔											✔											
20T245																				✔																						
24T245																				✔																						
32T245																				✔																						

00～38

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
00							✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔										✔	✔	✔	✔											
02							✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔										✔	✔	✔	✔											
03							✔			✔																		✔	✔													
04							✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔										✔	✔	✔	✔											
U04															✔			✔										✔		✔	✔											
05							✔			✔	✔		✔	✔	✔													✔		✔												
06										✔		✔						✔												✔	✔											
07										✔		✔						✔												✔	✔											
08							✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔										✔	✔	✔	✔											
09							✔			✔	✔																															
10							✔	✔	✔	✔	✔	✔	✔	✔		✔												✔	✔	✔	✔											
11							✔	✔	✔	✔			✔	✔														✔	✔	✔												
14										✔		✔	✔	✔	✔	✔	✔	✔										✔	✔	✔	✔											
16												✔																														
17												✔						✔																								
19										✔																																
20							✔	✔	✔	✔	✔		✔	✔														✔	✔	✔												
21							✔	✔	✔	✔																		✔	✔	✔												
25												✔																														
26										✔																																
27							✔	✔	✔	✔																		✔	✔	✔												
30							✔	✔	✔	✔																		✔	✔													
31										✔																																
32							✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔										✔	✔	✔	✔											
33							✔			✔																																
34																		✔																								
35							✔																																			
37							✔			✔	✔																															
38							✔		✔	✔	✔	✔																														

42～137

✔ Product available in technology indicated   + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
42										✔																		✔	✔													
45												✔																														
47										✔		✔																														
51										✔	✔																															
52																											✔															
73										✔																		✔	✔													
74							✔	✔	✔	✔	✔		✔	✔	✔	✔		✔										✔	✔	✔	✔											
75										✔																		✔	✔													
85										✔	✔																	✔	✔													
86							✔	✔	✔	✔	✔		✔	✔	✔	✔												✔	✔	✔	✔											
90										✔																																
92										✔																																
93										✔																		✔	✔													
96										✔																																
97												✔																														
107										✔		✔																✔	✔													
109							✔	✔	✔	✔			✔	✔														✔	✔													
112							✔		✔	✔	✔		✔	✔														✔	✔			✔										
121												✔																														
122										✔																																
123										✔		✔			✔	✔												✔	✔	✔												
124											✔																															
125	✔			✔	✔	✔			✔	✔					✔	✔	✔	✔										✔	✔	✔	✔											
126	✔			✔	✔	✔			✔	✔					✔	✔	✔	✔										✔	✔	✔	✔											
128												✔																														
132										✔	✔																	✔	✔	✔												
133							✔																																			
136										✔																																
137							✔																					✔	✔													

138～192

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
138							✔	✔	✔	✔	✔		✔	✔	✔	✔											✔	✔	✔	✔	✔											
139							✔			✔	✔		✔	✔	✔	✔												✔	✔	✔	✔											
140											✔																															
145										✔		✔																														
147																												✔	✔													
148																												✔														
150												✔																														
151							✔	✔	✔	✔	✔		✔	✔														✔	✔													
153							✔	✔	✔	✔			✔	✔														✔	✔													
154												✔																✔	✔													
155										✔																																
156							✔			✔																																
157							✔	✔	✔	✔	✔		✔	✔	✔	✔											✔	✔	✔	✔	✔											
158							✔	✔		✔			✔	✔	✔	✔												✔	✔													
159												✔																														
161							✔	✔	✔	✔			✔	✔														✔	✔	✔												
163							✔	✔	✔	✔	✔		✔	✔													✔	✔	✔	✔												
165							✔			✔			✔	✔														✔	✔	✔												
166							✔			✔																		✔	✔	✔												
169							✔			✔																		✔	✔	✔												
170							✔	✔	✔	✔																																
173										✔																																
174										✔																		✔	✔													
175							✔	✔	✔	✔	✔		✔	✔														✔	✔	✔												
175							✔	✔	✔	✔	✔	✔	✔	✔														✔	✔	✔												
181								✔		✔																																
190																												✔														
191							✔			✔																	✔	✔	✔													
192																												✔														

193～276

✔ Product available in technology indicated　　+ New product planned in technology indicated

BiCMOS

DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT
193						
194						
195						
215						
221						
225						
229						
232						
235						
236						
237						
238						
240	✔			✔		✔
241	✔			✔		✔
243						
244	✔			✔	✔	✔
245	✔			✔	✔	✔
247						
250						
251						
253						
257						
258						
259						
260						
263						
266						
273	✔					✔
276						

BIPOLAR

DEVICE	ALS	AS	F	LS	S	TTL
193	✔			✔		
194		✔		✔		
195						
215						
221				✔		✔
225					✔	
229						
232						
235						
236						
237						
238						
240	✔	✔	✔	✔	✔	
241	✔	✔	✔	✔	✔	
243	✔			✔		
244	✔	✔	✔	✔	✔	
245	✔	✔	✔	✔		
247				✔		
250		✔				
251	✔		✔	✔		
253	✔	✔	✔	✔		
257	✔	✔	✔	✔	✔	
258	✔	✔	✔	✔		
259	✔			✔		
260			✔		✔	
263						
266				✔		
273	✔			✔		
276						✔

CMOS

DEVICE	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
193																✔	✔			
194																✔	✔			
195																✔				
215																				
221																✔	✔	✔		
225																				
229																				
232																				
235																				
236																				
237																✔	✔			
238	✔	✔														✔	✔			
240	✔	✔	✔	✔		✔										✔	✔	✔	✔	
241	✔	✔														✔	✔			
243																✔	✔			
244	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	
245	✔	✔	✔	✔	✔	✔		✔							✔	✔	✔	✔	✔	
247																				
250																				
251	✔															✔	✔			
253	✔	✔														✔	✔			
257	✔	✔													✔	✔	✔		✔	
258		✔														✔	✔			
259																✔	✔			
260																				
263																				
266																✔				
273	✔	✔	✔	✔											✔	✔	✔	✔		
276																				

OTHER

DEVICE	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
193										
194										
195										
215			✔							
221										
225			✔							
229			✔							
232			✔							
235			✔							
236			✔							
237										
238										
240										
241										
243										
244										
245			✔							
247										
250										
251										
253										
257										
258										
259										
260										
263			✔							
266										
273			✔							
276										

279～423

✔ Product available in technology indicated　+ New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
279										✔																																
280							✔	✔	✔	✔	✔		✔	✔														✔	✔													
283									✔	✔	✔		✔	✔														✔	✔						✔							
286								✔																																		
292										✔																																
293										✔																									✔							
294										✔																																
297										✔				✔														✔	✔													
298								✔		✔																																
299							✔		✔	✔			✔	✔														✔	✔													
306																																					✔					
323							✔						✔																													
348										✔																																
354																												✔	✔													
356																													✔													
365										✔																		✔	✔													
366																												✔														
367										✔		✔			✔	✔												✔	✔	✔												
368										✔		✔																✔	✔													
373	✔			✔		✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔											✔	✔	✔	✔											
374	✔			✔		✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔										✔	✔	✔	✔	✔											
375										✔																																
377	✔								✔	✔																	✔	✔	✔													
378										✔																																
390										✔																		✔	✔													
393										✔																		✔	✔	✔												
399										✔																	✔															
406																				✔																						
423										✔																		✔	✔													

442～598

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR					
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL
442										✔		
465										✔		
480												
518							✔					
520							✔					
521							✔		✔			
533	✔						✔		✔			
534	✔						✔					
540	✔			✔		✔	✔			✔		
541	✔			✔		✔	✔		✔	✔		
543	✔			✔		✔			✔			
561							✔					
563							✔					
564							✔					
569							✔					
573	✔			✔		✔	✔	✔	✔			
574	✔			✔		✔	✔	✔	✔			
575							✔	✔				
576							✔	✔				
577							✔					
580							✔					
590										✔		
592										✔		
593										✔		
594										✔		
595										✔		
596										✔		
597										✔		
598										✔		

DEVICE	CMOS																			
	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
442																				
465																				
480															✔					
518																				
520															✔					
521																				
533	✔	✔														✔	✔			
534	✔	✔														✔	✔			
540	✔	✔	✔	✔											✔	✔	✔	✔	✔	
541	✔	✔	✔	✔											✔	✔	✔	✔	✔	
543															✔				✔	
561																				
563	✔	✔														✔	✔			
564	✔	✔													✔	✔	✔			
569																				
573	✔	✔	✔	✔											✔	✔	✔	✔	✔	
574	✔	✔	✔	✔											✔	✔	✔	✔	✔	
575																				
576																				
577																				
580																				
590																✔				
592																				
593																✔		✔		
594		✔	✔													✔		✔		
595		✔	✔																	
596																✔	✔			
597																				
598																				

DEVICE	OTHER									
	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
442										
465										
480										
518										
520										
521										
533										
534										
540										
541										
543										
561										
563										
564										
569										
573										
574										
575										
576										
577										
580										
590										
592										
593										
594										
595										
596										
597										
598										

599～684

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
599										✔																																
620	✔						✔																																			
621							✔																																			
623	✔			✔			✔		✔	✔			✔	✔													✔	✔	✔													
624										✔																																
628										✔																																
629										✔																																
638							✔	✔																																		
639							✔																																			
640	✔			✔			✔	✔		✔																		✔	✔													
641							✔	✔		✔																																
642							✔			✔																																
645							✔	✔		✔																		✔	✔													
646	✔					✔				✔			✔	✔													✔	✔	✔		✔											
648							✔	✔		✔																																
651	✔																																									
652	✔					✔	✔			✔			✔	✔													✔	✔	✔		✔											
653							✔																																			
654							✔																																			
657	✔								✔																																	
666							✔																																			
667							✔																																			
669										✔																																
670										✔																		✔	✔													
673										✔																																
674										✔																																
679							✔																																			
682										✔																		✔														
684										✔																		✔														

688～873

✔ Product available in technology indicated　+ New product planned in technology indicated

BiCMOS

DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT
688						
697						
746						
756				✔		
757				✔	✔	
760				✔		
804						
805						
808						
817						
818						
821	✔					
823	✔					
825						
827	✔					
828						
832						
833	✔					
841	✔					
843	✔					
845						
853	✔					
857						
861	✔					
863	✔					
867						
869						
870						
873						

BIPOLAR

DEVICE	ALS	AS	F	LS	S	TTL
688	✔			✔		
697				✔		
746	✔					
756		✔				
757		✔				
760	✔	✔				
804	✔	✔				
805	✔	✔				
808		✔				
817						
818						
821		✔				
823		✔				
825		✔				
827						
828						
832	✔	✔				
833						
841	✔	✔				
843	✔					
845	✔					
853						
857	✔					
861						
863						
867	✔	✔				
869	✔	✔				
870	✔					
873	✔	✔				

CMOS

DEVICE	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
688																✔	✔			
697																				
746																				
756																				
757																				
760																				
804																				
805																				
808																				
817																				
818															✔					
821																			✔	
823															✔				✔	
825															✔					
827															✔				✔	
828																			✔	
832																				
833																				
841															✔				✔	
843																				
845																				
853																				
857																				
861																			✔	
863																			✔	
867																				
869																				
870																				
873																				

OTHER

DEVICE	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
688										
697										
746										
756										
757										
760										
804										
805										
808										
817				✔						
818										
821										
823										
825										
827										
828										
832										
833										
841										
843										
845										
853										
857										
861										
863										
867										
869										
870										
873										

874～1444

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR					
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL
874							✔	✔				
876							✔	✔				
885								✔				
990							✔					
992							✔					
994							✔					
996							✔					
1000								✔				
1004							✔	✔				
1005							✔					
1008								✔				
1016									✔			
1032								✔				
1034							✔	✔				
1035							✔					
1050											✔	
1051											✔	
1052											✔	
1053											✔	
1056									✔			
1071												
1073												
1244							✔					
1245							✔					
1284												
1394												
1395												
1404												
1444												

DEVICE	CMOS																			
	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
874																				
876																				
885																				
990																				
992																				
994																				
996																				
1000																				
1004																				
1005																				
1008																				
1016																				
1032																				
1034																				
1035																				
1050																				
1051																				
1052																				
1053																				
1056																				
1071		✔																		
1073		✔																		
1244																				
1245																				
1284		✔																		
1394																				
1395																				
1404																			✔	
1444																			✔	

DEVICE	OTHER									
	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
874										
876										
885										
990										
992										
994										
996										
1000										
1004										
1005										
1008										
1016										
1032										
1034										
1035										
1050										
1051										
1052										
1053										
1056										
1071										
1073										
1244										
1245										
1284										
1394					✔					
1395					✔					
1404										
1444										

1612～2373

✔ Product available in technology indicated   + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
1612																																					✔					
1616																																					✔					
1627																																										
1640							✔																																			
1645							✔																														✔					
1650																																		✔								
1651																																		✔								
1653																																		✔								
1655																																				✔	✔					
2006																																				✔						
2007																																				✔						
2010																																				✔						
2031																																		✔								
2033																																		✔			✔					
2034																																					✔					
2040																																		✔								
2041																																		✔								
2107																																				✔						
2226																																			✔							
2227																																			✔							
2228																																			✔							
2229																																			✔							
2235																																			✔							
2240	✔			✔			✔																				✔															
2241	✔			✔																																						
2244	✔			✔					✔																		✔				✔											
2245	✔			✔		✔			✔																		✔				✔											
2257																											✔															
2373									✔																		✔															

2374～3640

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS ABT	BiCMOS ALB	BiCMOS ALVT	BiCMOS BCT	BiCMOS 64BCT	BiCMOS LVT	BIPOLAR ALS	BIPOLAR AS	BIPOLAR F	BIPOLAR LS	BIPOLAR S	BIPOLAR TTL
2374												
2414				✔								
2541							✔					
2543												
2573												
2574												
2646												
2652												
2827	✔			✔								
2952	✔					✔						
3010												
3125												
3126												
3244												
3245												
3251												
3253												
3257												
3305												
3306												
3345												
3383												
3384												
3612												
3614												
3622												
3631												
3632												
3640												

DEVICE	CMOS AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
2374															✔					
2414																				
2541															✔					
2543															✔					
2573															✔					
2574															✔					
2646															✔					
2652															✔					
2827															✔					
2952															✔				✔	
3010																				✔
3125									✔	✔	✔	✔	✔							
3126											✔		✔							
3244									✔		✔	✔								
3245									✔	✔	✔	✔	✔						✔	
3251									✔		✔		✔							
3253									✔	✔	✔	✔	✔							
3257									✔	✔	✔	✔	✔							
3305									✔			✔								
3306									✔	✔	✔	✔								✔
3345									✔		✔	✔								
3383										✔	✔	✔	✔							
3384									✔	✔	✔	✔	✔							
3612																				
3614																				
3622																				
3631																				
3632																				
3640																				

DEVICE	OTHER ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
2374										
2414										
2541										
2543										
2573										
2574										
2646										
2652										
2827										
2952										
3010										
3125										
3126										
3244										
3245					✔					
3251										
3253										
3257										
3305										
3306										
3345										
3383										
3384										
3612			✔							
3614			✔							
3622			✔							
3631			✔							
3632			✔							
3640			✔							

3641～4025

✔ Product available in technology indicated　　+ New product planned in technology indicated

BiCMOS / BIPOLAR

DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL
3641												
3650												
3651												
3660												
3670												
3680												
3690												
3857												
3861												
4001												
4002												
4007												
4009												
4010												
4011												
4012												
4013												
4014												
4015												
4016												
4017												
4018												
4019												
4020												
4021												
4022												
4023												
4024												
4025												

CMOS

DEVICE	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
3641																				
3650																				
3651																				
3660																				
3670																				
3680																				
3690																				
3857													✔							
3861												✔	✔							
4001														✔						
4002														✔		✔				
4007														✔						
4009														✔						
4010														✔						
4011														✔						
4012														✔						
4013														✔						
4014														✔						
4015														✔		✔				
4016														✔		✔				
4017														✔		✔				
4018														✔						
4019														✔						
4020														✔		✔	✔			
4021														✔						
4022														✔						
4023														✔						
4024														✔		✔	✔			
4025														✔						

OTHER

DEVICE	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
3641			✔							
3650			✔							
3651			✔							
3660			✔							
3670			✔							
3680			✔							
3690			✔							
3857										
3861										
4001										
4002										
4007										
4009										
4010										
4011										
4012										
4013										
4014										
4015										
4016										
4017										
4018										
4019										
4020										
4021										
4022										
4023										
4024										
4025										

4026～4063

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
4026																										✔																
4027																										✔																
4028																										✔																
4029																										✔																
4030																										✔																
4031																										✔																
4033																										✔																
4034																										✔																
4035																										✔																
4040																										✔		✔	✔	✔												
4041																										✔																
4042																										✔																
4043																										✔																
4044																										✔																
4045																										✔																
4046																										✔		✔	✔	✔												
4047																										✔																
4048																										✔																
4049																										✔		✔														
4050																										✔		✔														
4051																										✔		✔	✔	✔												
4052																										✔		✔	✔	✔												
4053																										✔		✔	✔	✔												
4054																										✔																
4055																										✔																
4056																										✔																
4059																										✔		✔														
4060																										✔		✔	✔													
4063																										✔																

4066～4503

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
4066															✔											✔		✔	✔	✔												
4067																										✔		✔	✔													
4068																										✔																
4069																										✔																
4070																										✔																
4071																										✔																
4072																										✔																
4073																										✔																
4075																										✔		✔	✔													
4076																										✔																
4077																										✔																
4078																										✔																
4081																										✔																
4082																										✔																
4085																										✔																
4086																										✔																
4089																										✔																
4093																										✔																
4094																										✔		✔	✔													
4097																										✔																
4098																										✔																
4099																										✔																
4245																										✔																
4316																															✔											
4351																												✔	✔													
4352																												✔	✔													
4374																												✔														
4502																										✔																
4503																										✔																

4504～5402

✔ Product available in technology indicated + New product planned in technology indicated

	BiCMOS						BIPOLAR						CMOS																				OTHER									
DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
4504																										✔																
4508																										✔																
4510																										✔																
4511																										✔		✔	✔													
4512																										✔																
4514																										✔		✔	✔													
4515																										✔		✔	✔													
4516																										✔																
4517																										✔																
4518																										✔		✔														
4520																										✔		✔	✔													
4521																										✔																
4522																										✔																
4527																										✔																
4532																										✔																
4536																										✔																
4538																												✔	✔													
4541																										✔																
4543																										✔		✔	✔													
4555																										✔																
4556																										✔																
4572																										✔																
4585																										✔																
4724																										✔																
4851																												✔														
4852																												✔														
5400	✔																																									
5401	✔																																									
5402	✔																																									

5403～8244

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
5403	✔																																									
6800																					✔		✔	✔																		
6845																								✔																		
7001																												✔														
7002																												✔														
7032																												✔														
7046																												✔	✔													
7266																												✔														
7802																																			✔							
7803																																			✔							
7804																																			✔							
7805																																			✔							
7806																																			✔							
7807																																			✔							
7808																																			✔							
7811																																			✔							
7813																																			✔							
7814																																			✔							
7819																																			✔							
7820																																			✔							
7881																																			✔							
7882																																			✔							
8003								✔																																		
8151																														✔												
8153																														✔												
8154																														✔												
8157																														✔												
8240																																							✔			
8244																																							✔			

8245～11245

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																			
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC
8245																																
8373																																
8374																																
8543																																
8550																																
8574																																
8575																																
8646																																
8652																																
8952																																
8980																																
8986																																
8990																																
8996																																
8997																																
9306																																
11000													✔	✔																		
11004													✔	✔																		
11008													✔	✔																		
11030														✔																		
11032													✔	✔																		
11074													✔	✔																		
11086													✔																			
11138													✔																			
11139														✔																		
11175													✔																			
11240													✔	✔																		
11244													✔	✔																		
11245													✔	✔																		

DEVICE	OTHER									
	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
8245							✔			
8373							✔			
8374							✔			
8543							✔			
8550								✔		
8574									✔	
8575									✔	
8646							✔			
8652							✔			
8952							✔			
8980							✔			
8986							✔			
8990							✔			
8996							✔			
8997							✔			
9306								✔		
11000										
11004										
11008										
11030										
11032										
11074										
11086										
11138										
11139										
11175										
11240										
11244										
11245										

11257～16334

✔ Product available in technology indicated　　+ New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
11257													✔	✔																												
11286														✔																												
11373														✔																												
11374														✔																												
11543														✔																												
11652														✔																												
14538																										✔																
16209																							✔																			
16210																					✔	✔	✔	✔	✔																	
16211																					✔	✔	✔	✔	✔																	
16212																						✔	✔	✔	✔																	
16213																							✔																			
16214																							✔	✔																		
16222																																✔										
16232																							✔																			
16233																							✔																			
16240	✔		✔			✔								✔	✔	✔	✔	✔									✔				✔											
16241	✔					✔																																				
16244	✔	✔	✔			✔							✔	✔	✔	✔	✔	✔		✔	✔		✔	✔			✔				✔											
16245	✔	✔	✔			✔							✔	✔		✔	✔	✔		✔	✔		✔	✔			✔				✔		✔									
16246																																	✔									
16260	✔																✔																									
16269																	✔			✔																						
16270																	✔																									
16271																	✔																									
16282																	✔																									
16292																							✔		✔																	
16334																	✔			✔																						
16344																	✔																									

16373～16820

✔ *Product available in technology indicated* + *New product planned in technology indicated*

	BiCMOS						BIPOLAR						CMOS																				OTHER									
DEVICE	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
16373	✔		✔			✔							✔	✔	✔	✔	✔	✔		✔							✔				✔											
16374	✔		✔			✔							✔	✔	✔	✔	✔	✔		✔							✔				✔											
16390																							✔																			
16409																	✔																									
16460	✔																																									
16470	✔																																									
16500	✔					✔											✔										✔															
16501	✔					✔											✔										✔															
16524																	✔																									
16525																	✔																									
16540	✔														✔	✔															✔											
16541	✔					✔								✔	✔	✔															✔											
16543	✔					✔								✔			✔										✔				✔											
16600	✔																✔																									
16601	✔		✔														✔																									
16612																																				✔	✔					
16616																																				✔						
16622	✔													✔																						✔						
16623	✔																																									
16640	✔					✔								✔			✔			✔							✔				✔											
16646														✔																												
16651														✔																												
16652	✔					✔							✔	✔													✔				✔											
16657	✔													✔																												
16721																	✔																									
16722																				✔																						
16800																								✔	✔																	
16811																					✔			✔																		
16820																				✔																						

16821～18502

✔ Product available in technology indicated　　+ New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
16821	✔		✔														✔																									
16823	✔													✔			✔										✔															
16825	✔													✔			✔																									
16827	✔		✔											✔			✔			✔							✔															
16831																	✔																									
16832																	✔																									
16833	✔																																									
16834																	✔			✔																						
16835						✔											✔			✔																						
16841	✔													✔			✔										✔															
16843	✔																																									
16853	✔																																									
16857																																										✔
16859																																										✔
16861														✔									✔																			
16863	✔													✔			✔																									
16901																	✔													✔												
16903																	✔																									
16912																																					✔					
16916																																					✔					
16918																																						✔				
16919																																						✔				
16923																																				✔						
16927																																					✔					
16945	✔					✔																															✔					
16952														✔			✔										✔				✔											
16973																	✔																									
18245																																							✔			
18502																																							✔			

18504～32318

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
18504																																							✔			
18511						✔																																				
18512																																							✔			
18514																																							✔			
18640																																							✔			
18646																																							✔			
18652																																							✔			
21395																																					✔					
22033																																					✔					
22034																																					✔					
22501																																										✔
25244				✔	✔																																					
25245	✔			✔	✔																																					
25642				✔																																						
29821				✔			✔																																			
29823							✔																																			
29825				✔																																						
29827				✔			✔																																			
29828							✔																																			
29833							✔																																			
29843				✔																																						
29854							✔																																			
29863				✔			✔																																			
29864				✔																																						
32240						✔																									✔											
32244			✔			✔											✔	✔													✔											
32245	✔					✔											✔	✔			✔		✔								✔											
32316	✔																																									
32318	✔																																									

32373～162240

✔ Product available in technology indicated   + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
32373			✔			✔																									✔											
32374			✔			✔											✔	✔													✔											
32501	✔																✔																									
32543	✔																																									
32852																																										✔
32867																																										✔
32877																																										✔
32912																																					✔					
32916																																					✔					
32945																																					✔					
32973																	✔																									
40102																										✔																
40103																										✔		✔	✔													
40105																																			✔							
40106																										✔																
40107																										✔																
40109																										✔																
40110																										✔																
40117																										✔																
40147																										✔																
40161																										✔																
40174																										✔																
40175																										✔																
40192																										✔																
40193																										✔																
40194																										✔																
40257																										✔																
161284																														✔	✔											
162240						✔																					✔															

162241～162831

✔ Product available in technology indicated + New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER									
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	PCA	PCF	VME
162241						✔																																				
162244	✔		✔			✔											✔										✔				✔											
162245	✔		✔			✔											✔										✔				✔											
162260	✔																✔																									
162268																	✔																									
162280																	✔																									
162282																	✔																									
162334																	✔																									
162344																	✔																									
162373						✔											✔										✔															
162374						✔											✔										✔															
162409																	✔																									
162460	✔																																									
162500	✔																										✔															
162501	✔																										✔															
162525																	✔																									
162541						✔																																				
162543																											✔															
162601	✔																✔																									
162646																											✔															
162652																											✔															
162721																	✔																									
162820																	✔																									
162822																																						✔				
162823	✔																										✔															
162825	✔																																									
162827	✔		✔														✔										✔															
162830																	✔																									
162831																	✔																									

162832～34X245

✔ Product available in technology indicated　+ New product planned in technology indicated

DEVICE	BiCMOS						BIPOLAR						CMOS																				OTHER							
	ABT	ALB	ALVT	BCT	64BCT	LVT	ALS	AS	F	LS	S	TTL	AC	ACT	AHC	AHCT	ALVC	AUC	AUP	AVC	CB3Q	CB3T	CBT	CBT-C	CBTLV	CD4K	FCT	HC	HCT	LV/LV-A/LV-AT	LVC	TVC	ABTE	FB	FIFO	GTL	GTLP	HSTL	JTAG	VME
162832																	✔																							
162834																	✔																							
162835																	✔																							
162836																	✔																							
162841	✔																✔										✔													
162952																											✔													
164245																	✔			✔																				
182502																																							✔	
182504																																							✔	
182512																																							✔	
182646																																							✔	
182652																																							✔	
322374						✔																																		
324245																				✔																				
34X245																							✔																	

TI给“无铅”所下的定义

TI的无铅是指符合目前RoHS（有害物质限制）标准对于所有6种有害物质的要求（包括“在均质材料中铅的含量按重量计算不得超过0.1%”这项要求）的半导体产品。在专为于高温条件下进行焊接而设计的情况下，TI的无铅产品适合在规定的无铅工艺中使用。

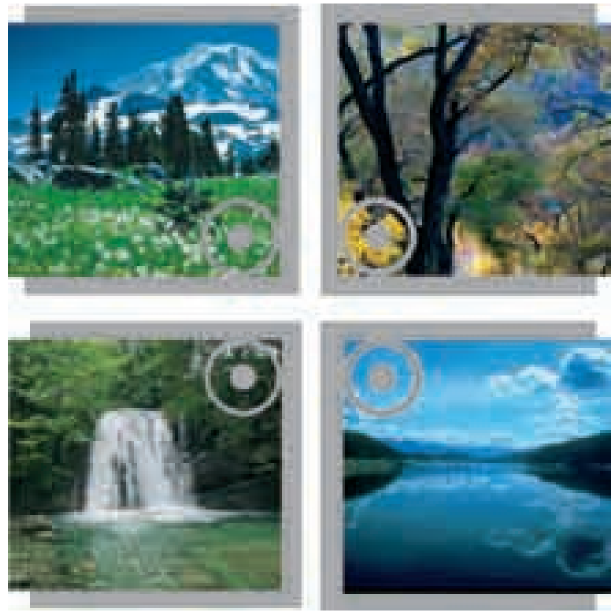
TI的主要信息资源

一般信息：www.ti.com.cn/quality

物质和无铅时间表搜索工具有：
http://focus.ti.com.cn/cn/quality/docs/prdcntsearch.tsp?templateId=5909&navigationId=11220

常见问题及解答：
http://focus.ti.com.cn/cn/quality/docs/gencontent.tsp?templateId=5909&navigationId=11808&contentId=5067

或者，您也可以与TI的销售代理或授权分销商联系；或访问TI的全球产品信息中心，网址是：support.ti.com。



TI的无铅行动计划（RoHS兼容性）

TI承诺提供符合RoHS标准的无铅产品。

我们遵循一条积极进取的产品演进路线，并且已经将我们半导体产品库中的大多数产品转变为无铅解决方案。

TI 经过验证的无铅解决方案

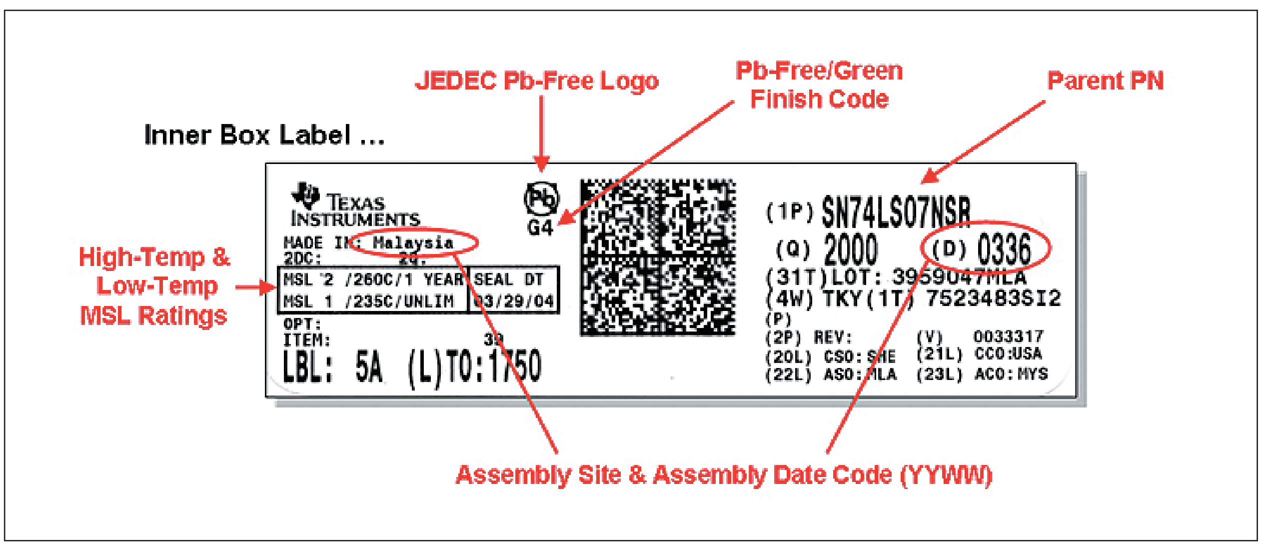
早在10多年之前，TI就开始从半导体产品中去除铅。

镍钯金 (NiPdAu) 是我们主要的引线框架无铅涂层。

业界普遍将这种涂层认可为经过验证、具有可靠性（无锡须）的首选解决方案。

在采用NiPdAu涂层的半导体产品当中，我们为用户提供的选择是最齐全的之一。

我们的无铅阵列封装中的焊球基于业界标准的锡银铜 (SnAgCu) 工艺（含铅的焊球版本将可以继续供货）。



ECO-FRIENDLY SOLUTIONS • FROM TEXAS INSTRUMENTS • RoHS "GOLD"

封装选项和标示信息

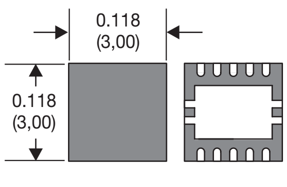
Pin	PDIP	SOIC	SOP	SSOP	QSOP	TSSOP
8	P	D	PS	DCT		PW
14		D	NS	DB		PW
16	N NE	D DW	NS	DB	DBQ	PW
18	N	DW				
20	N	DW	NS	DB	DBQ	PW
24	NT	DW	NS	DB	DBQ	PW
28		DW		DB DL		PW
38						DBT
48				DL		DGG
56				DL		DGG
64						DGG

封装选项和标示信息

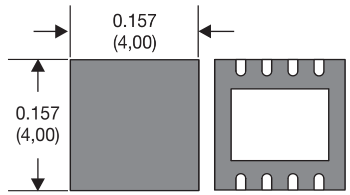
Pin	VSSOP	TVSOP	SOT	QFN	MIRCO QFN	WCSP	XLGA
3			DBZ, PK				
4			DCY, DZD	DRS		YFP, YZV	YFM
5			DBV, DCK, DRL, DRT			YZP, YEA/YZA	
6			DCK, DBV, DRL, DRT, DCQ		DRY, DSF	YZP, YFP, YEA/YZA, YFC	
8	DGN, DDU, DGK, DCU		DCN	DRG, DRJ	DQE, RSE	YFP, YZP, YEA/YZA	
9						YFP	
10	DGS			DRC	RSE	YZP	
12				RSF	RUE	YFC, YZT	
14		DGV		RGY	RUC		
16		DGV		RGT, RTE, RGY	RSV	YFP	
20		DGV		RGW, RGY		YFP	
24		DGV		RTW, RGE, RHL, RGE			
25						YFP	
30						YFC	
32				RGJ, RSM, RHB			
36				RHH			
42				RVA			
48		DGV					
56		DGV		RHU, RGQ			
80		DBB					

Pin	BGA
8	YFP
12	ZXU
20	ZXY, VFBGA GQN/ZQN
24	ZQS, VFBGA GQL/ZQL
48	ZAH, ZQC
54	ZRD
56	VFBGA GQL/ZQL
83	ZRG
96	VFBGA GKE/ZKE, ZRL
114	VFBGA GKF/ZKF

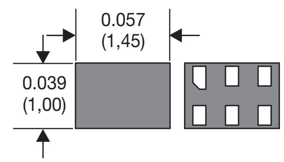
典型封装尺寸



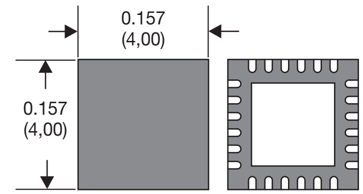
10-Pin
QFN (DRC)
Lead Pitch = 0.020 (0,50)
Height = 0.035 (0,90)
Area = 0.014 (9,03)



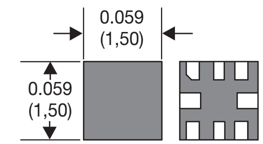
8-Pin
QFN (DRJ)
Lead Pitch = 0.031 (0,80)
Height = 0.029 (0,75)
Area = 0.025 (16,13)



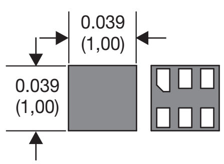
6-Pin
Micro QFN (DRY)
Lead Pitch = 0.020 (0,50)
Height = 0.022 (0,55)
Area = 0.002 (1,29)



24-Pin
QFN (RGE)
Lead Pitch = 0.020(0,50)
Height = 0.035 (0,90)
Area = 0.025 (16,13)



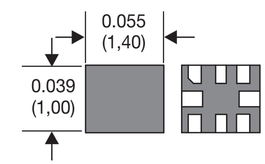
8-Pin
QFN (RSE)
Lead Pitch = 0.020 (0,50)
Height = 0.022 (0,55)
Area = 0.003 (1,94)



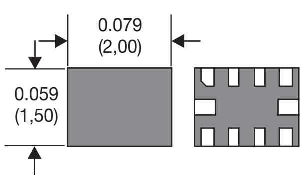
6-Pin Micro
QFN (DSF)
Lead Pitch = 0.014 (0,35)
Height = 0.014 (0,37)
Area = 0.001 (0,645)

For more TI logic packaging offerings, visit:
logic.ti.com

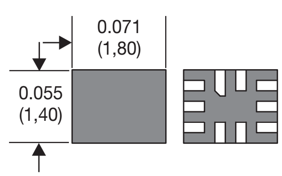
Dimensions are in inches (millimeters)



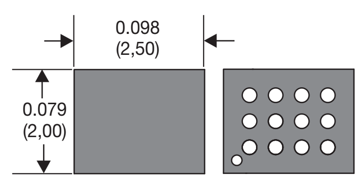
8-Pin Micro
QFN (DQE)
Lead Pitch = 0.014 (0,35)
Height = 0.014 (0,37)
Area = 0.002 (1,29)



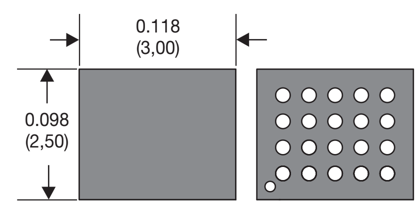
10-Pin
QFN (RSE)
Lead Pitch = 0.020 (0,50)
Height = 0.022 (0,55)
Area = 0.005 (3,23)



10-Pin
QFN (RSW)
Lead Pitch = 0.016 (0,40)
Height = 0.020 (0,50)
Area = 0.004 (2,58)

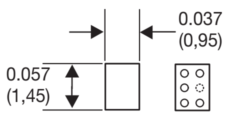


12-Ball
PBGA (ZXU)
Ball Pitch = 0.020 (0,50)
Height = 0.014 (0,363)
Area = 0.008 (5,16)

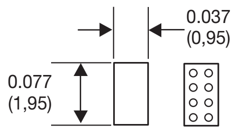


20-Ball
PBGA (ZXY)
Ball Pitch = 0.020 (0,50)
Height = 0.014 (0,363)
Area = 0.012 (7,74)

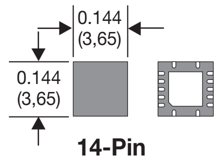
典型封装尺寸



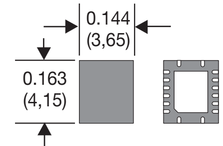
5-/6-Ball WCSP NanoFree™ Package (YZP)
Ball Pitch = 0.020 (0,50)
Height = 0.020 (0,50)
Area = 0.002 (1,26)



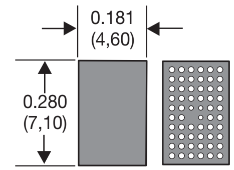
8-Ball WCSP NanoFree™ Package (YZP)
Ball Pitch = 0.020 (0,50)
Height = 0.020 (0,50)
Area = 0.003 (1,85)



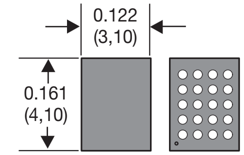
14-Pin QFN (RGY)
Lead Pitch = 0.020 (0,50)
Height = 0.039 (1,00)
Area = 0.021 (13,3)



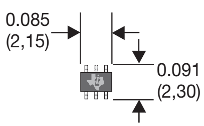
16-Pin QFN (RHL)
Lead Pitch = 0.020 (0,50)
Height = 0.039 (1,00)
Area = 0.023 (15,1)



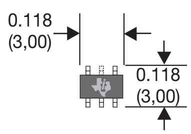
56-Ball VFBGA (GQL)
Ball Pitch = 0.026 (0,65)
Height = 0.039 (1,00)
Area = 0.051 (32,7)



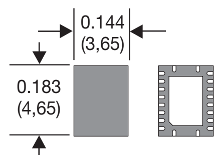
20-Ball PBGA (GQN)
Ball Pitch = 0.026 (0,65)
Height = 0.039 (1,00)
Area = 0.020 (12,7)



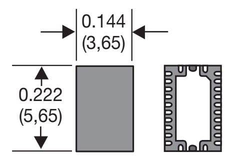
5-/6-Pin SC-70 (DCK)
Lead Pitch = 0.026 (0,65)
Height = 0.037 (0,95)
Area = 0.008 (4,95)



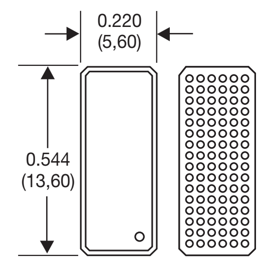
5-/6-Pin SOT-23 (DBV)
Lead Pitch = 0.037 (0,95)
Height = 0.047 (1,20)
Area = 0.014 (9)



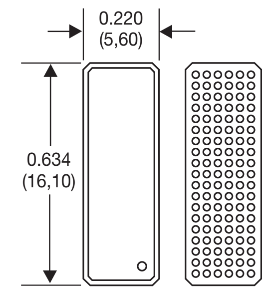
20-Pin QFN (RGY)
Lead Pitch = 0.020 (0,50)
Height = 0.039 (1,00)
Area = 0.026 (17,0)



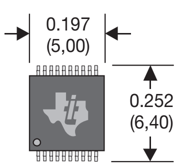
24-Pin QFN (RHL)
Lead Pitch = 0.020 (0,50)
Height = 0.039 (1,00)
Area = 0.032 (21,0)



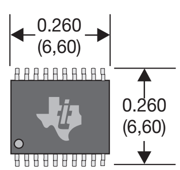
96-Ball LFBGA (GKE)
Ball Pitch = 0.031 (0,80)
Height = 0.055 (1,40)
Area = 0.139 (90,2)



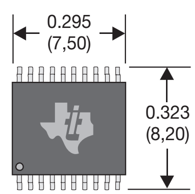
114-Ball LFBGA (GKF)
Ball Pitch = 0.031 (0,80)
Height = 0.055 (1,40)
Area = 0.139 (90,2)



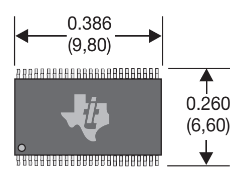
20-Pin TVSOP (DGV)
Lead Pitch = 0.016 (0,40)
Height = 0.047 (1,20)
Area = 0.050 (32)



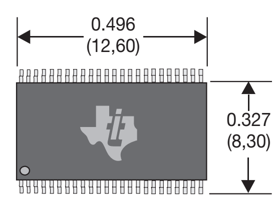
20-Pin TSSOP (PW)
Lead Pitch = 0.026 (0,65)
Height = 0.047 (1,20)
Area = 0.068 (44)



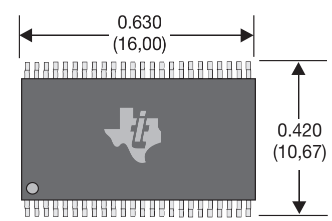
20-Pin SSOP (DB)
Lead Pitch = 0.026 (0,65)
Height = 0.079 (2,0)
Area = 0.095 (62)



48-Pin Widebus TVSOP (DGV)
Lead Pitch = 0.016 (0,40)
Height = 0.047 (1,20)
Area = 0.100 (63)



48-Pin Widebus TSSOP (DGG)
Ball Pitch = 0.026 (0,65)
Height = 0.039 (1,00)
Area = 0.051 (32,7)



48-Pin Widebus SSOP (DL)
Lead Pitch = 0.025 (0,635)
Height = 0.110 (2,79)
Area = 0.265 (171)

器件名称和封装标号

实例：

SN	74	LVC	H	16	2	244	A	DGG	R	E4
1	2	3	4	5	6	7	8	9	10	11

1 标准前缀

例：SN——标准前缀
SNJ——符合MIL-PRF-38535 (QML) 标准

2 温度范围

例：54——军用
74——商用

3 系列

例：空白——晶体管-晶体管逻辑 (TTL)
ABT——先进的BiCMOS技术
ABTE/ETL——先进的BiCMOS技术/增强型收发器逻辑
AC/ACT——先进的CMOS逻辑
AHC/AHCT——先进的高速CMOS逻辑
ALB——先进的低电压BiCMOS
ALS——先进的低功率肖特基逻辑
ALVC——先进的低电压CMOS技术
ALVT——先进的低电压BiCMOS技术
AS——先进的肖特基逻辑
AUC——先进的超低电压CMOS逻辑
AUP——先进的超低功率CMOS逻辑
AVC——先进的非常低电压CMOS逻辑
BCT——BiCMOS总线接口技术
CB3Q——2.5V/3.3V低电压高带宽总线开关Crossbar技术逻辑
CB3T——2.5V/3.3V低电压转换器总线开关Crossbar技术逻辑
CBT——Crossbar技术
CBT-C——具有2V下冲保护能力的5V总线开关Crossbar技术逻辑
CBTLV——低电压Crossbar技术逻辑
F——F逻辑
FB——背板收发器逻辑/Futurebus+
GTL——冈宁 (Gunning) 收发器逻辑
GTLP——冈宁 (Gunning) 收发器逻辑增强型
HC/HCT——高速CMOS逻辑
HSTL——高速收发器逻辑
LS——低功率肖特基逻辑
LV-A——低电压CMOS技术
LV-AT——低电压CMOS逻辑——与TTL兼容
LVC——低电压CMOS技术
LVT——低电压BiCMOS技术
PCA/PCF——I2C内置集成电路应用
S——肖持基逻辑
SSTL——短截线串联端接逻辑
SSTU——短截线串联端接超低电压逻辑
SSTV/SSTVF——短截线串联端接低电压逻辑
TVC——转换电压箝位逻辑
VME——VersaModule Eurocard总线技术

4 特殊功能

例：空白 = 无特殊功能
C——可配置VCC (LVCC)
D——电平移位二极管 (CBTD)
H——总线保持 (ALVCH) 电路 (CBTK)
K——下冲保护端口 (LVCR)
R——位于两个输出端上的阻尼电阻器
S——肖特基箝位二极管 (CBTS)
Z——上电三态 (LVCZ)

5 位宽

例：空白 = 门、MSI和八通道器件
1G——单门
2G——双门
3G——三门
8——八通道IEEE 1149.1 (JTAG)
16——Widebus（16位、18位和20位）
18——Widebus IEEE 1149.1 (JTAG)
32——Widebus+（32位和36位）

6 选项

例：空白 = 无选项输出端口
2——在一个输出端上设有串联阻尼电阻
4——电平移位器
25——25Ω线路驱动器

7 功能

例：244——同相缓冲器/驱动器
374——D类触发器
573——D类透明锁存器
640——反相收发器

8 器件修订版本

例：空白 = 无修订版本
字母标号A～Z

9 封装

商用：D、DW——小外形集成电路 (SOIC)
DB、DBQ、DCT、DL——窄间距小外形封装 (SSOP)
DBB、DGV——扁薄非常小外形封装 (TVSOP)
DBQ——四分之一尺寸小外形封装 (QSOP)
DBV、DCK、DCY、PK——小外形晶体管 (SOT)
DCU——非常薄的窄间距小外形封装 (VSSOP)
DGG、PW——薄型窄间距小外形封装 (TSSOP)
FN——塑料引线芯片载体封装 (PLCC)
GGM、GKE、GKF、ZKE、ZKF——MicroStar BGA™
扁平细间距球栅阵列封装 (LFBGA)
GQL、GQN、ZQL、ZQN、ZXU、ZXY——MicroStar Junior™
外形非常薄的细间距球栅阵列封装 (VFBGA)
N、NT、P——塑料双列直插式封装 (PDIP)
NS、PS——小外形封装 (SOP)
PAG、PAH、PCA、PCB、PM、PN、PZ——薄体方形扁平式封装 (TQFP)
PH、PQ、RC——方形扁平式封装 (QFP)
PZA——薄型（译注：封装本体厚度为1.4mm）QFP封装 (LQFP)
RGQ、RGY、DRY、RSE、RSW、DRJ、DRC、RGE——方形扁平无引线封装 (QFN)
YZP——NanoStarTM和NanoFreeTM芯片尺寸球栅阵列封装 (DSBGA†)
军用：FK——无引线陶瓷芯片载体封装 (LCCC)
GB——陶瓷针栅阵列封装 (CPGA)
HFP、HS、HT、HV——陶瓷方形扁平式封装 (CQFP)
J、JT——陶瓷双列直插式封装 (CDIP)
W、WA、WD——陶瓷扁平式封装 (CFP)

10 编带和卷盘

R——卷带包装（标准卷盘数量）
T——卷带包装（短卷盘，250个）

11 RoHS和绿色环保状况

E_——符合JEDEC制定的针对无铅和减少环境有害物质的JESD97 E类规范
G_——除了E类规范要求减少的有害物质之外，还减少了更多对环境有害的物质（锑和溴）

†DSBGA是晶圆芯片级封装 (WCSP) 的JEDEC参考。

以前由Cypress Semiconductor公司提供的逻辑产品

实例：

CY	74	FCT	162	H	245	A	T	PV	C	T	E4
1	2	3	4	5	6	7	8	9	10	11	12

1 获得的Cypress FCT逻辑产品的前缀名

可以是空白以适应18个字符的限制。

2 温度范围

例：54——军用（-55℃至125℃）

74——商用/工业用（-40℃至85℃）

29——商用/工业用或军用（见数据表）

3 系列

例：FCT——Fast™ CMOS TTL逻辑

4 16或更高位宽及平衡驱动

例：空白

16x——16或更高位宽及平衡驱动

162——平衡驱动（串联输出电阻器）

5 总线保持

例：空白 = 无总线保持

H——总线保持（仅在前面是“16x”时出现——见第4项）

6 型名

多达5位数字

例：245

1652

16245

7 速度等级

例：空白 = 标准速度等级

A

B

C

D

8 TTL或CMOS输出

例：空白 = CMOS输出

T——TTL输出

9 封装

例：P——塑料双列直插式封装 (PDIP) (N)

PA——薄型窄间距小外形封装 (TSSOP) (DGG/G)

PV——窄间距小外形封装 (SSOP) (DL)

Q——四分之一尺寸外形封装 (QSOP) (DBQ)

SO——小外形集成电路 (SOIC) (DL)

10 工艺

例：C——商业工艺

11 编带和卷盘

例：T——卷带包装

12 RoHS和绿色环保状况

E_——符合JEDEC制定的针对无铅和减少环境有害物质的JESD97 E类规范

G_——除了E类规范要求减少的有害物质之外，还减少了更多对环境有害的物质（锡和溴）

以前由Harris Semiconductor公司提供的逻辑产品

CD4000命名法

实例：

CD	4011	B	E	XX	E4
1	2	3	4	5	6

1 获得的Harris
数字逻辑产品的前缀名

2 型名
多达5位数字

3 电源电压
例：A——12V（最大值）
B——18V（最大值）
UB——18V（最大值），无缓冲

4 封装
例：D——陶瓷侧面铜焊双列直插式封装 (DIP)
E——塑料DIP
F——陶瓷DIP
K——陶瓷扁平式封装
M——塑料表面贴装小外形集成电路 (SOIC)
SM——塑料窄间距SOIC (SSOP)
M96——卷绕式塑料表面贴装SOIC
SM96——卷绕式塑料窄间距SOIC (SSOP)

5 高可靠性筛查
仅针对军用产品
例：3——不符合MIL-STD-883 Class B标准
4——完全符合MIL-STD-883 Class B标准

6 RoHS和绿色环保状况
E_——符合JEDEC制定的针对无铅和减少环境有害物质的JESD97 E类规范

G_——除了E类规范要求减少的有害物质之外，还减少了更多对环境有害的物质（锡和溴）

CD-AC/CD-ACT先进CMOS和CD-HC/CD-HCT/CD-HCU高速CMOS命名法

实例：

CD	74	ACT	245	E	XX	E3
1	2	3	4	5	6	7

1 获得的Harris
数字逻辑产品的前缀名

2 温度范围
例：54/74——军用（-55℃至125℃）

3 系列
例：AC——先进的CMOS逻辑，CMOS输入电平
ACT——先进的CMOS逻辑，TTL输入电平
HC——高速CMOS逻辑，CMOS输入电平
HCT——高速CMOS逻辑，TTL输入电平
HCU——高速CMOS逻辑，CMOS输入电平，无缓冲

4 型名
多达5位数字

5 封装
例：E——塑料双列直插式封装 (DIP)
EN——塑料窄体型24引脚DIP
F——陶瓷DIP
M——塑料表面贴装小外形集成电路 (SOIC)
SM——塑料窄间距SOIC (SSOP)
M96——卷绕式塑料表面贴装SOIC
SM96——卷绕式塑料窄间距SOIC (SSOP)

6 高可靠性筛查
仅针对高可靠性产品
例：3A——完全符合MIL-STD-883标准

7 RoHS和绿色环保状况
E_——符合JEDEC制定的针对无铅和减少环境有害物质的JESD97 E类规范

G_——除了E类规范要求减少的有害物质之外，还减少了更多对环境有害的物质（锡和溴）

以前由Harris Semiconductor公司提供的逻辑产品

实例：

CD	74	FCT	245	A	E	E4
1	2	3	4	5	6	7

1 获得的Harris
数字逻辑产品的前缀名

2 温度范围
例：74——商用（0℃至70℃）

3 系列
例：FCT——总线接口，TTL输入电平

4 型名
多达5位数字

5 速度等级
例：空白或A——标准等效于FAST™

6 封装
例：E——塑料双列直插式封装 (DIP)
EN——塑料窄体型24引脚DIP
F——陶瓷DIP
M——塑料表面贴装小外形集成电路 (SOIC)
SM——塑料窄间距SOIC (SSOP)
M96——卷绕式塑料表面贴装SOIC
SM96——卷绕式塑料窄间距SOIC (SSOP)

7 RoHS和绿色环保状况
E_——符合JEDEC制定的针对无铅和减少环境有害物质的JESD97 E类规范
G_——除了E类规范要求减少的有害物质之外，还减少了更多对环境有害的物质（锡和溴）

各种封装的湿度敏感性

表A-1按等级罗列了TI封装的湿度敏感性。有些封装的湿度敏感性等级会因引脚数目而不同。

表A-1：逻辑器件封装湿度敏感性的不同等级

PACKAGE	LEVEL 1	LEVEL 2	LEVEL 2A	LEVEL 3	LEVEL 4
PLCC	FN (20/28)				
SOT	DBV (5) DCK (5)				
SOP		NS (14/16/20)† PS (8)†			
SOIC		D (8/14/16)† DW (16/20/24/28)†			
SSOP	DCT (8) DL (28/48/56)	DB (14/16/20/24/28/30/38)† DBQ (16/20/24)†			
QSOP		DBQ (16/20/24)†			
TSSOP	DGG (48/56/64)† PW (8/14/16/20/24)†				
TVSOP	DBB (80)† DGV (14/16/20/24/48/56)†				
VSSOP	DCU (8)				
QFN		RGY (14/16/20)†			
QFP		RC (52)			
TQFP		PAG (64) PCA (100) PN (80) PZ (100)			PM (64)
MicroStar BGA				GKE (96) GKF (114)	
MicroStar Junior BGA	YEA (5/8)		GQL (56)		

† Meets 250°C

NOTES: 1. No current device packages are moisture-sensitivity levels 5 or 6.
2. Some device types in these packages may have different moisture-sensitivity levels than shown.
3. All levels except level 1 are dry packed.

TI的通孔封装（N、NT）未按照JESD22-A112A/JESD22-A113A标准进行测试。由于通孔PCB焊接工艺的特性，组件封装与焊接波峰被PC板所隔开，因而不会像表面贴装型组件那样经受较高的回流焊温度。

TI的通孔组件封装被归入“非湿度敏感”类。

各种封装的湿度敏感性

表A-3是TI与其他半导体制造公司的封装交叉参考。

表A-3：同类竞争逻辑器件的封装交叉参考

PACKAGE TYPE	NO. PINS	TI	TI-ACQUIRED HARRIS	TI-ACQUIRED CYPRESS	FAIRCHILD	IDT	IDT-ACQUIRED QUALITY	ON (formerly Motorola)	PERICOM	NXP	RENESAS	ST MICRO	TOSHIBA
DSBGA†	5	YZP‡	—	—	MicroPak™	—	—	—	—	—	—	—	—
	8	YZP‡	—	—	MicroPak™	—	—	—	—	—	—	—	—
LFBGA	96	GKF‡	—	—	G	BF	—	—	—	EC	—	—	—
	114	GKF‡	—	—	—	BF	—	—	NB	ED	—	—	—
PDIP	8	P	E	P	N, P, PC	P	P	P, N	P	N	—	EY	P
	14	N	E	P	N, P, PC	P	P	P, N	P	N	—	B, B1R, EY	P
	16	N	E	P	P, PC	P	—	P, N	P	N	—	B, B1R, EY	P
	20	N	E	P	P, PC	P	—	P, N	P	N	—	B, B1R, EY	P
	24	NT	EN	P	NT, SP	PT	—	N	P	N2	—	B, B1R, EY	P
	28	NT	—	P	—	PT	—	—	P	—	—	—	—
QSOP	16	DBQ	—	Q	—	Q	Q	—	—	—	—	—	—
	20	DBQ	—	Q	—	Q	Q	—	Q	—	—	—	—
	24	DBQ	—	Q	—	Q	Q	—	—	—	—	—	—
SOIC	14	D	M	SO	M, S, SC	DC	S1	D	W	D	RP	M/MTR, M1R/ RM13TR, M1/M013TR	FN
	16	D	D, M	SO	M, S, SC	DC	S1	D	W	D	RP	M/MTR, M1R/ RM13TR, M1/M013TR	FN
	16	DW	DW, M	SO	—	SO	S0	DW	S	—	—	M/MTR, M1R/ RM13TR, M1/M013TR	—
	20	DW	M	SO	WM, SC	SO	S0	DW	S	DW	RP	M/MTR, M1R/ RM13TR, M1/M013TR	FN
	24	DW	M	SO	WM, SC	SO	S0	DW	S	DW	RP	—	—
	28	DW	—	SO	—	SO	S0	—	S	DW	RP	—	—
SOP	14	NS	—	—	SJ	—	—	F, M(EL)	—	—	FP	—	—
	16	NS	—	—	SJ	—	—	F, M(EL)	—	—	FP	—	—
	20	NS	—	—	SJ	—	—	F, M(EL)	—	—	FP	—	—

封装交叉参考

表A-3：同类竞争逻辑器件的封装交叉参考（续）

PACKAGE TYPE	NO. PINS	TI	TI-ACQUIRED HARRIS	TI-ACQUIRED CYPRESS	FAIRCHILD	IDT	IDT-ACQUIRED QUALITY	ON (formerly Motorola)	PERICOM	NXP	RENESAS	ST MICRO	TOSHIBA
SSOP	14	DB	—	—	—	—	—	SD	H	DB	—	—	—
	16	DB	SM	—	—	—	—	SD	H	DB	—	—	—
	16	DBQ	—	Q	—	Q	Q	—	Q	—	—	—	—
	20	DB	SM	—	MSA	PY	—	SD	H	DB	—	—	—
	20	DBQ	—	Q	QSC	Q	Q	—	Q	—	—	—	—
	24	DB	SM	—	MSA	PY	—	SD	H	DB	—	—	—
	24	DBQ	—	Q	—	Q	Q	—	Q	—	—	—	—
	28	DB	—	—	—	PY	—	—	H	DB	—	—	—
	30	DB	—	—	—	—	—	—	—	—	—	—	—
	38	DB	—	—	—	—	—	—	—	—	—	—	—
	28	DL	—	—	—	—	—	—	—	—	—	—	—
	48	DL	—	PV	MEA/SSC	PV	PV	—	V	DL	—	—	—
	56	DL	—	PV	MEA/SSC	PV	PV	—	V	DL	—	—	—
TSSOP	14	PW	—	—	MTC	—	—	DT	L	PW/DH	TTP	TTR	FS, FT
	16	PW	—	—	MTC	—	—	DT	L	PW/DH	TTP	TTR	FS, FT
	20	PW	—	—	MTC	PG	—	DT	L	PW/DH	TTP	TTR	FS, FT
	24	PW	—	—	MTC	PG	PA	DT	L	PW/DH	TTP	TTR	—
	28	PW	—	—	—	PG	—	—	L	—	TTP	TTR	—
	48	DGG	—	PA	MTC	PA	PA	DT	A	DGG	TTP	TTR	FT
	56	DGG	—	PA	MTC	PA	PA	DT	A	DGG	TTP	TTR	FT
	64	DGG	—	—	—	—	—	—	—	—	TTP	TTR	—
TVSOP	14	DGV	—	—	—	—	—	—	—	DGV	—	—	—
	16	DGV	—	—	—	—	—	—	—	—	—	—	—
	20	DGV	—	—	—	—	—	—	—	—	—	—	—
	24	DGV	—	—	—	—	—	—	—	—	—	—	—
	48	DGV	—	—	—	PF	Q1§	—	K¶	—	—	—	—
	16	DGV	—	—	—	PF	—	—	K6	—	—	—	—
	80	DBB	—	—	—	—	—	—	—	—	TTP	—	—

封装交叉参考

表A-3：同类竞争逻辑器件的封装交叉参考（续）

PACKAGE TYPE	NO. PINS	TI	TI-ACQUIRED HARRIS	TI-ACQUIRED CYPRESS	FAIRCHILD	IDT	IDT-ACQUIRED QUALITY	ON (formerly Motorola)	PERICOM	NXP	RENESAS	ST MICRO	TOSHIBA
VFBGA	20	GQN‡	—	—	—	—	—	—	—	—	—	—	—
	56	GQL‡	—	—	—	—	—	—	—	—	—	—	—
Single Gate	5	DBV	—	—	P5	—	—	—	—	GV	—	STR	F
	5	DCK	—	—	M5	—	—	DF	—	GW	CM(E)	CTR	FU
Dual Gate	8	DCT	—	—	—	—	—	—	—	—	—	—	FU
	8	DCU	—	—	K8	—	—	—	—	—	US(E)	CTR	FK
Triple Gate	8	DCT	—	—	—	—	—	—	—	—	—	—	FU
	8	DCU	—	—	K8	—	—	—	—	—	US(E)	—	FK

† DSBGA is the JEDEC reference for wafer chip scale package (WCSP).
‡ Also available in lead-free (YZA).
§ Quality Semiconductor's QVSOP package has the same pitch but slightly different footprint than the TI TVSOP package.
¶ Pericom has a QVSOP with similar specifications and lead pitch to the TI TVSOP package.
# Tape-and-reel packaging is valid for surface-mount packages only. All orders must be for whole reels.
R = Standard tape and reel (required for DBB, DBV, and DGG; optional for D, DL, and DW packages).

封装交叉参考

表A-4～A-7按照封装类型分别罗列了采用封装管、卷盘、封装盒及托盘时的标准包装数量。

Table A-4. Tube Quantities

	PIN COUNT									
	8	14	16	20	24	28	44	48	56	68
DIP	50	25	25	20	15	13	N/A	N/A	N/A	N/A
PLCC	N/A	N/A	N/A	46	N/A	37	26	N/A	N/A	18
SOIC	75	50	40	25	25	20	N/A	N/A	N/A	N/A
SSOP	N/A	N/A	N/A	N/A	N/A	40	N/A	25	20	N/A

NOTE 1: QSOP (DBQ) and EIAJ devices (DB, NS, PS, and PW packages) are not available in tubes.

Table A-5. Reel Quantities

		PACKAGE DESIGNATOR	UNITS PER REEL
DSBGA†	5/8 pin	YZAR‡	3000
EIAJ surface mount		DBR/DBLE, NSR/NSLE, PWR/PWLE	2000
LFBGA	96/114 pin	GKE‡, GKF‡	1000
PLCC	20 pin	FNR	1000
	28 pin	FNR	750
	44 pin	FNR	500
QFN	14/16/20 pin	RGY	1000
	56 pin	RGQ	2000
QSOP	16/20/24 pin	DBQR	2500
SSOP	48/56 pin	DLR	1000
SOIC/SOP	14/16 pin	DR	2500
	Widebody 16 pin	DWR	2000
	20/24 pin	DWR	2000
	28 pin	DWR	1000
TQFP	64 pin	PMR	1000
TSSOP		DGGR	2000
VFBGA	20/56 pin	GQN‡, GQL‡	1000

† DSBGA is the JEDEC reference for wafer chip scale package (WCSP).
‡ Also available in lead-free.

Table A-6. Box Quantities

		PACKAGE DESIGNATOR	UNITS PER REEL
DIP		N	1000
		NT	750
		NP	700
SOIC		D, DW	1000
SSOP	48/56 pin	DL	1000

Table A-7. Tray Quantities

		PACKAGE DESIGNATOR	UNITS PER REEL
TQFP	64 pin	PM	160

封装交叉参考

下面罗列的是最近的TI逻辑器件技术文档集。根据合适的文献编号，您就可以通过TI的代理或授权分销商订购这些文档。

逻辑器件数据手册	文献编号
ABT（先进BiCMOS技术）逻辑器件数据手册 (1997)	SCBD002C
AC/ACT CMOS逻辑器件数据手册 (1997)	SCAD001D
AHC/AHCT（先进高速CMOS）逻辑器件数据手册 (2000)	SCLD003B
ALS/AS逻辑器件数据手册 (1995)	SDAD001C
ALVC（先进低电压CMOS）逻辑器件数据手册	SCED006B*
AUC（先进超低电压CMOS）逻辑器件数据手册 (2003)	SCED011A*
AVC（先进非常低电压CMOS）逻辑器件数据手册 (2000)	SCED008C*
HC/HCT（高速CMOS）逻辑器件数据手册 (2003)	SCLD001E
74F逻辑器件数据手册 (1994)	SDFD001B
数字逻辑器件袖珍数据手册 (2007)	SCYD013B*

有关的应用笔记

运用逻辑器件进行设计	SDYA009C*
选择适当的电平转换解决方案	SCEA035A*
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逻辑产品应用手册的设计考虑，第3卷 (2000)	SDYA019
双电源电平转换产品剪辑	SCYB033A*

其他有用的逻辑器件信息以及与逻辑器件有关的信息（续）	文献编号
I²C选择指南	SSZC003A*
小尺寸逻辑器件选择指南	SCYT129B*
逻辑器件交叉参考 (2003)	SCYB017B*
逻辑和模拟器件封装演进资料卡	SSZB138
可配置多功能小尺寸逻辑器件产品剪辑	SCYB010*
信号开关（包括数字/模拟/双向开关和电压箝位器）数据手册 (2004)	SCDD003A*
转换产品选择指南	SCYB018C

其他有关标准线性和逻辑器件的信息

数据传输电路数据手册	SLLD001B
模拟开关选择指南	SLYB125A*
AVCA (B) 164245转换器件应用剪辑	SCYB012*
具有关断功能的LP2981/LP2985/LP2985LV超低压差稳压器产品剪辑	SCYB034*
PCF8574和PCF8574A I/O扩展器产品剪辑	SCYB031*
精准型并联基准解决方案产品剪辑	SLDB002*
系统级ESD保护指南	SSZB130*
可提供的标准线性和逻辑器件 (SLL) 文献及支持（广告册）	SSZB132*
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逻辑器件采购工具/替代货源

表B-1～B-6罗列了与业界提供的大多数逻辑器件系列等效或相似的产品类别，并按照电压节点和特殊逻辑区分开来。作为逻辑产品的全球领导者，TI提供了门类极为宽泛的逻辑产品库，旨在满足您的设计需要。

Table B-1. 5-V Logic

TI	FAIRCHILD	IDT	ON	PERICOM	NXP	RENESAS	STMICRO	TOSHIBA
ABT	ABT				ABT			
AC	AC, ACQ		AC			AC	AC	AC
ACT	ACT, ACTQ		ACT			ACT	ACT	ACT
AHC	VHC		VHC		AHC		VHC	VHC
AHC1G	HS		VHC1G		AHC1G			TC7SH
AHCT	VHCT		VHCT		AHCT		VHCT	VHCT
AHCT1G	HST		VHC1GT		AHCT1G			TC7SET
ALS	ALS							
AS	AS							
BCT						BC		
CBT	FST	FST, QS	FST	PI5C				
CD4000	CD4000		MC14000		HEF4000		HCF4000	TC4000
F	FAST				FAST			
FCT		FCT		FCT				
HC	HC		HC		HC	HC	HC	HC
HCT	HCT		HCT		HCT	HCT	HCT	HCT
LS						LS		
LV-AT	VHCT							
S								
TTL								

Table B-2. 3.3-V Logic

TI	FAIRCHILD	IDT	ON	PERICOM	NXP	RENESAS	STMICRO	TOSHIBA
ALB								
ALVC	ALVC, VCX	ALVC	VCX		ALVC	ALVC	ALVC, VCX	VCX
AUP	ULP				AUP			
CBTLV/CB3Q		CBTLV, QS3VH		PI3B	CBTLV			
CB3T				PI3VT				
LV-A	LVX, VHC		LVX		LV	LV-A	LVX	LUX, VHC
LVC	LCX	LVC. FCT	LCX		LVC	LVC	LCX, LVC	LCX
LVT	LVT				LVT			

FAIRCHILD = Fairchild Semiconductor, IDT = Integrated Device Technology, ON = ON Semiconductor, PERICOM = Pericom Semiconductor, NXP = NXP Semiconductors, RENESAS = Renesas Technology, STMICRO = STMicroelectronics, TOSHIBA = Toshiba Semiconductor Company

逻辑器件采购工具/替代货源

Table B-3. 2.5-V Logic

TI	FAIRCHILD	NXP	PERICOM	STMICRO	TOSHIBA
ALVT		ALVT			
AVC	VCX	AVC		VCX	VCX
CB3Q			P13C		
CB3T			PI3VT		

Table B-4. 1.8-V Logic

TI	FAIRCHILD	NXP	TOSHIBA
AUC	VCX	AUC	VCX

Table B-5. Speciality Logic

TI	FAIRCHILD	NXP	PERICOM	RENESAS
GTL				
GTLP	GTLP	GTLP		
HSTL		HSTL	HSTL	
JTAG	SCAN			
TVC		GTL		
PCA, PCF		PCA, PCF		
SSTL		SSTL		
SSTU		SSTU	SSTU	
SSTV		SSTV	SSTV	SSTV

Table B-6. Little Logic

TI	FAIRCHILD	ON	NXP	PERICOM	RENESAS	STMICRO	TOSHIBA
SN74AHC1G	NC7S	MC74VHC1G	741HC1G		HD74LV1GA	74V1G	TC7SH
SN74AHCT1G	NC7ST	MC74VHC1GT	74AHCT1G		HD74LV1GT-A	74VIGT	TC7SET
SN74AUC1G	NC7SV	NL17SV					TC7SA/PA
SN74AHC2G	NC7WV						TC7PA
SN74AUP1G	NC7SP		74AUP1G				TC7SG
SN74AUP2G	NC7WP		74AUP2G				
SN74AUP3G	NC7NP		74AUP3G				
SN74AVC1T							
SN74AVC2T							
SN74CBT1G	NC7SZ				HD74CBT1G		TC7SB
SN74CBTD1G	NC7SZD						TC7SBD
SN74CBTLV1G							TC7SBL
SN74LVC1G	NC7SZ	NL17SZ	74LVC1G	PI74STX1G	HD74LVC1G	74LX1G	TC7SZ
SN74LVC1T							
SN74LVC2G	NC7WZ/WB	NL27WZ	74LVC2G	PI74STX2G	HD74LVC2G		TC7WZ
SN74LVC2T							
SN74LVC3G	NC7NZ	NL37WZ	74LVC3G		HD74LVC3G		TC7WZ

FAIRCHILD = Fairchild Semiconductor, IDT = Integrated Device Technology, ON = ON Semiconductor, PERICOM = Pericom Semiconductor, NXP = NXP Semiconductors, RENESAS = Renesas Technology, STMICRO = STMicroelectronics, TOSHIBA = Toshiba Semiconductor Company

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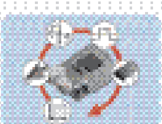

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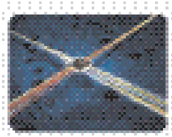

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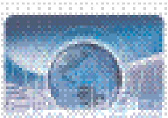

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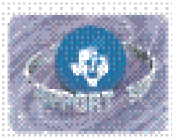

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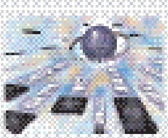

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