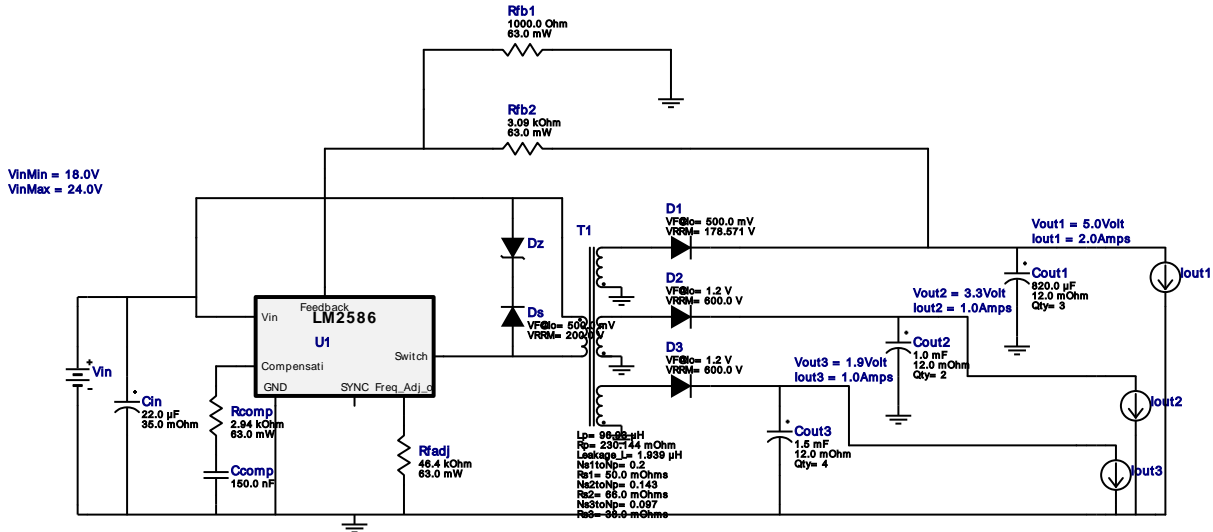


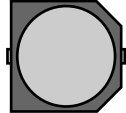



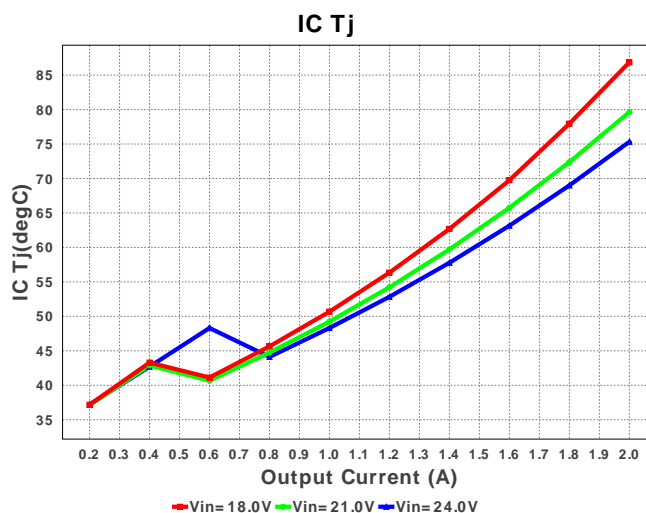
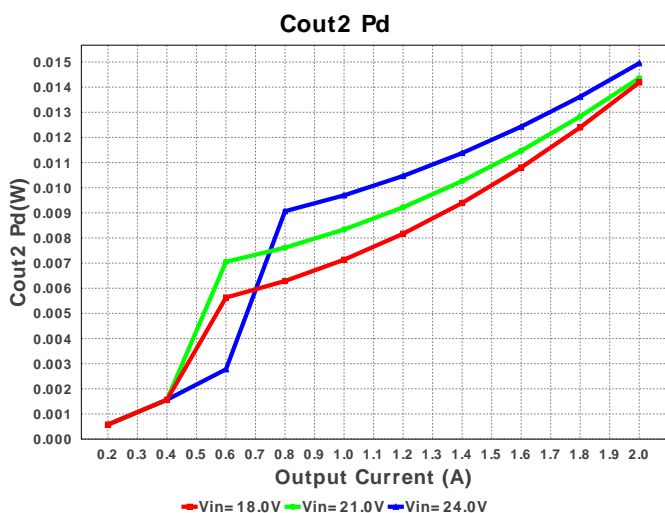


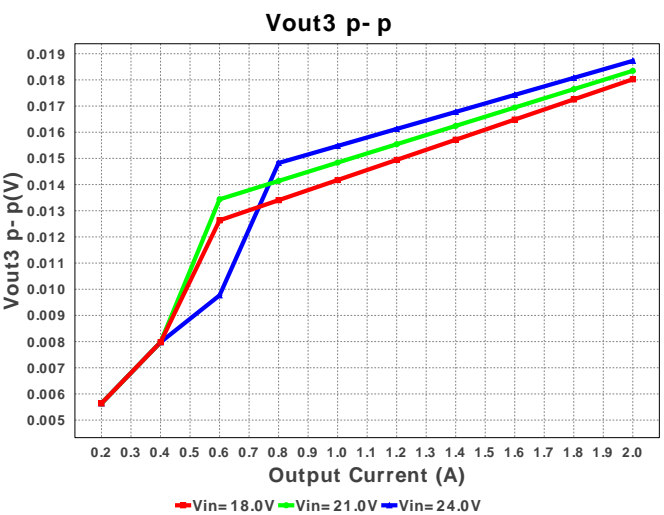
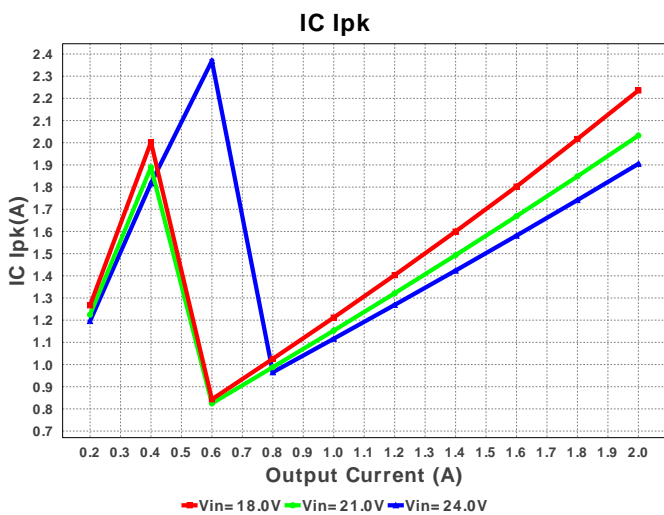
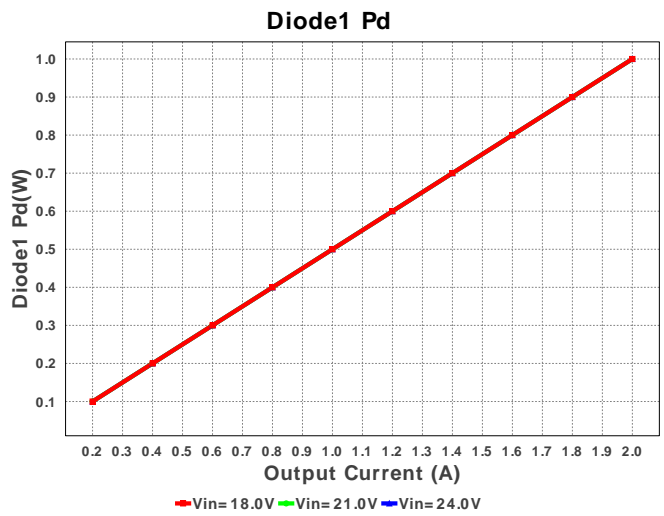
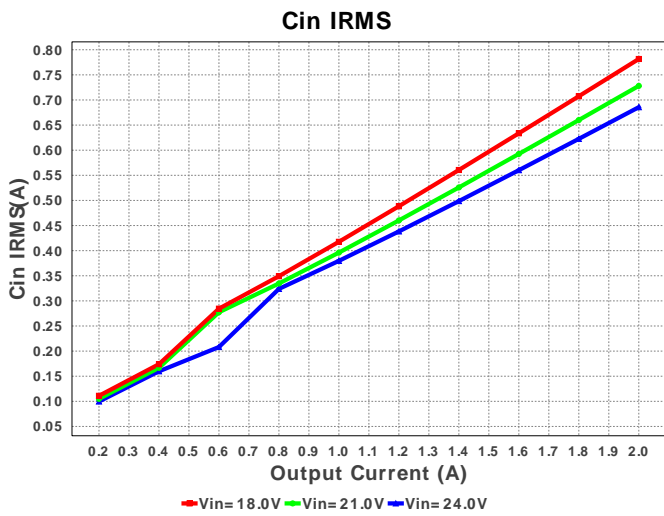
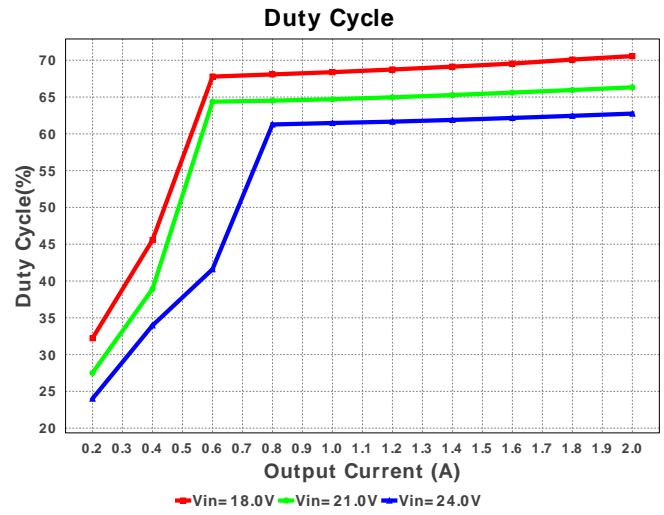
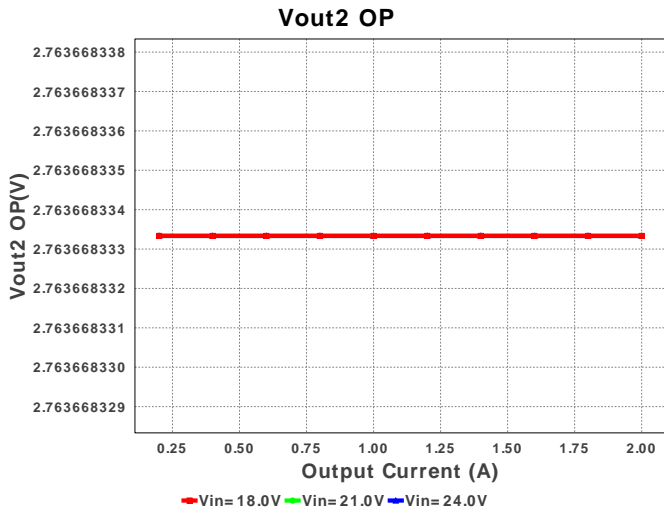
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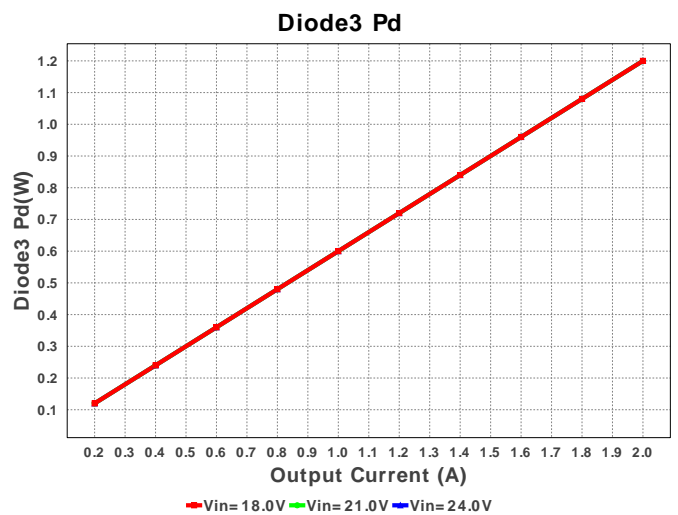
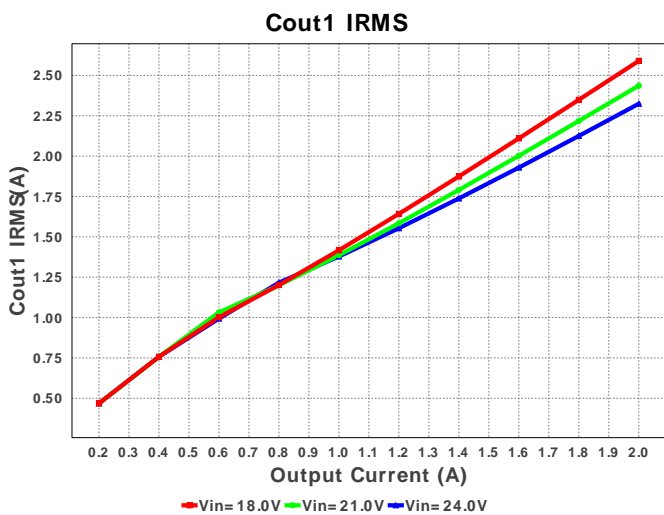
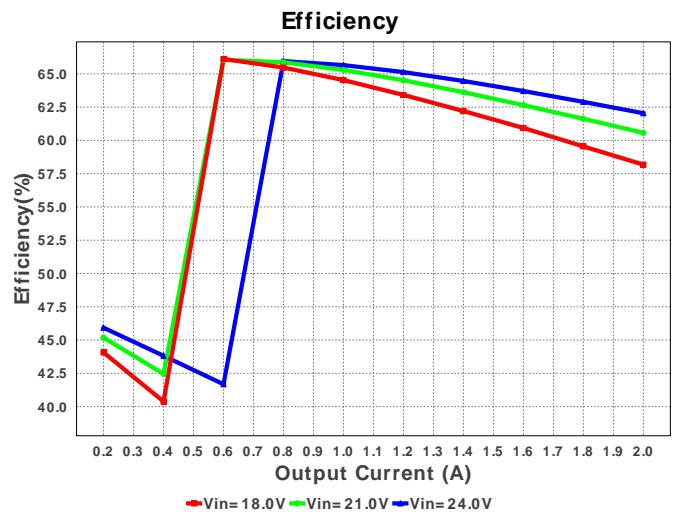
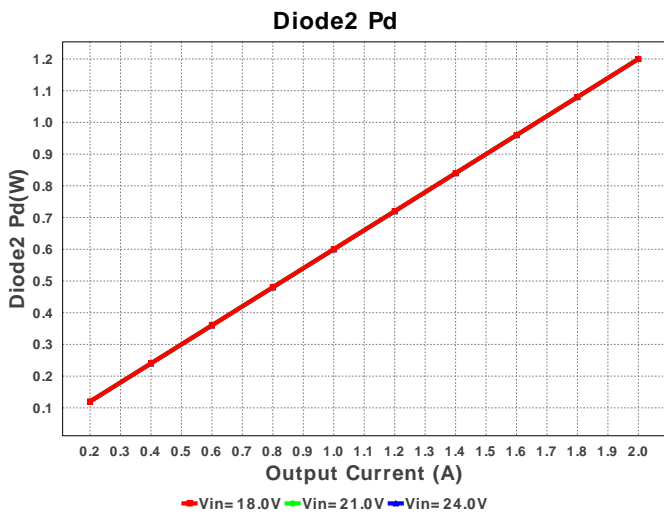
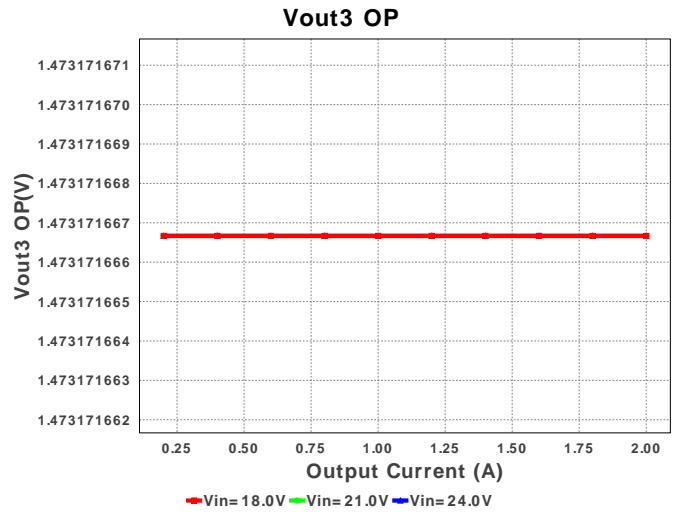
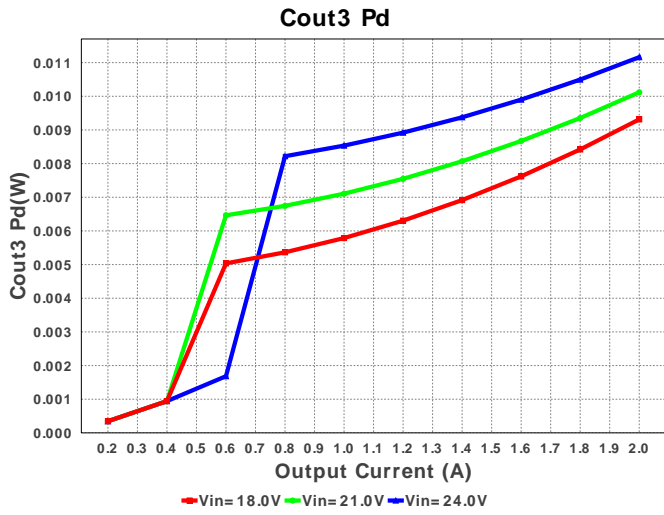
 Design : 1035567/9 LM2586T-ADJ/NOPB
 LM2586T-ADJ/NOPB 18.0V-24.0V to 5.00V @ 2.0A

Electrical BOM

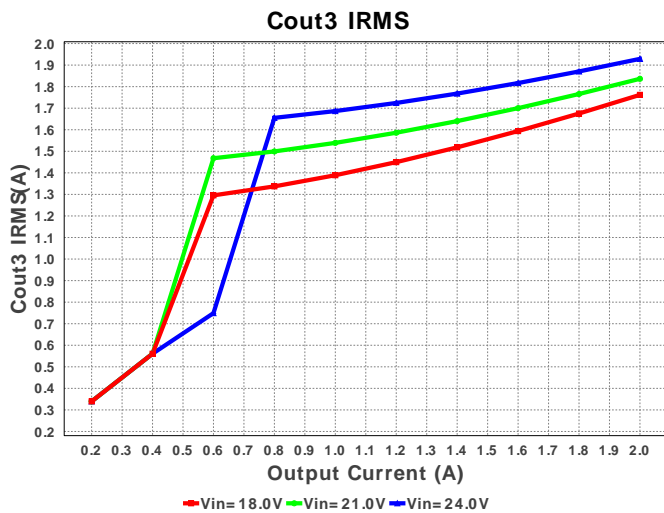
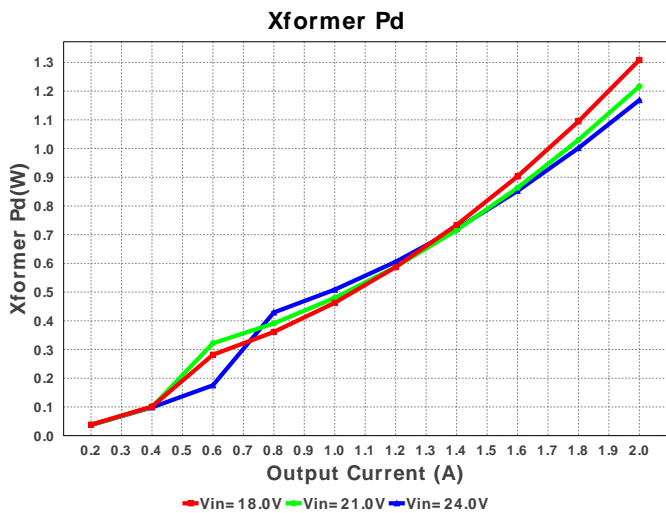
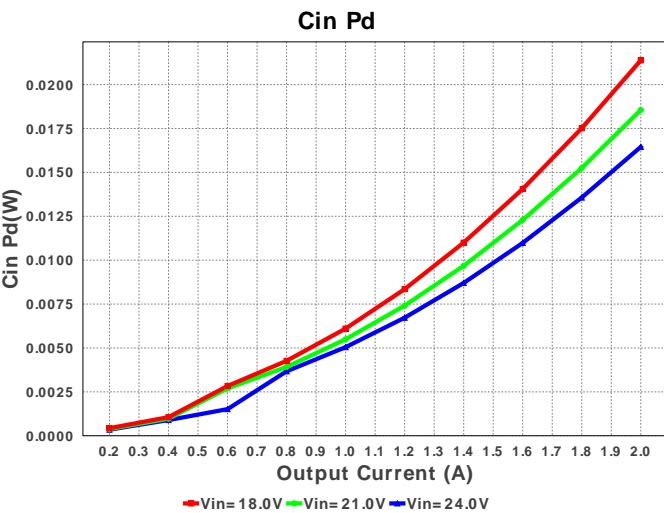
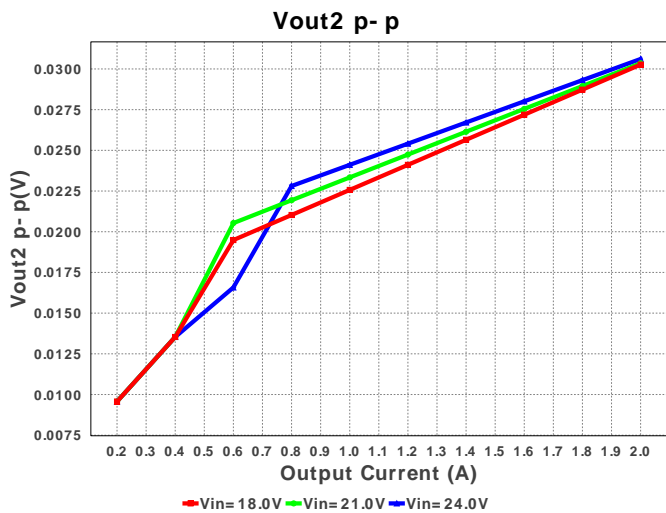
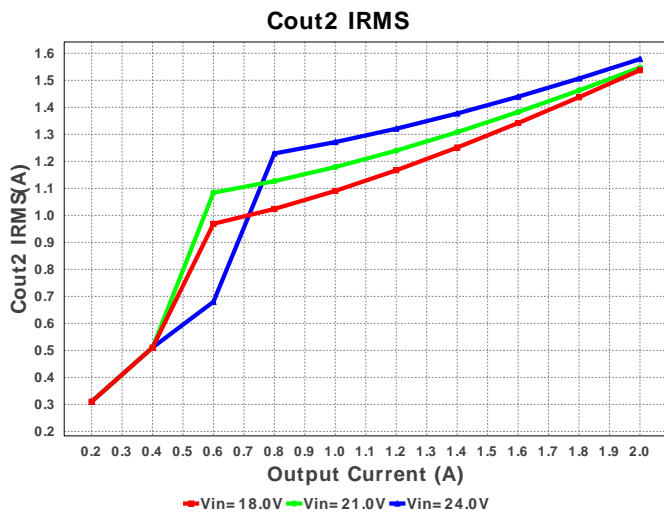
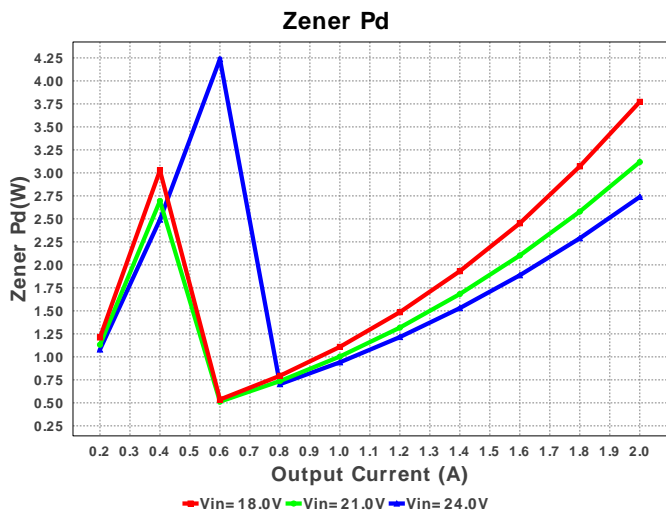
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Ccomp	MuRata	GRM155R61A154KE19D Series= X5R	Cap= 150.0 nF VDC= 10.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
2.	Cin	Panasonic	35SVPF22M Series= 1273	Cap= 22.0 uF ESR= 35.0 mOhm VDC= 35.0 V IRMS= 2.6 A	1	\$0.43	 CAPSMT_62_F61 74 mm ²
3.	Cout1	Panasonic	6SVP820M Series= 261	Cap= 820.0 uF ESR= 12.0 mOhm VDC= 6.3 V IRMS= 5.44 A	3	\$0.72	 SM_RADIAL_10AMM 160 mm ²
4.	Cout2	Panasonic	16SVPF1000M Series= 1273	Cap= 1.0 mF ESR= 12.0 mOhm VDC= 16.0 V IRMS= 5.4 A	2	\$0.74	 CAPSMT_62_F12 151 mm ²
5.	Cout3	Panasonic	2R5TPE1500MC Series= 1281	Cap= 1.5 mF ESR= 12.0 mOhm VDC= 2.5 V IRMS= 4.4 A	4	\$1.19	 7343-43 59 mm ²
6.	D1	CUSTOM	CUSTOM	VF@Io= 500.0 mV VRRM= 178.571 V	1	NA	CUSTOM 0 mm ²
7.	D2	Bourns	CD214B-F3600	VF@Io= 1.2 V VRRM= 600.0 V	1	\$0.14	 SMB 44 mm ²
8.	D3	Bourns	CD214B-F3600	VF@Io= 1.2 V VRRM= 600.0 V	1	\$0.14	 SMB 44 mm ²

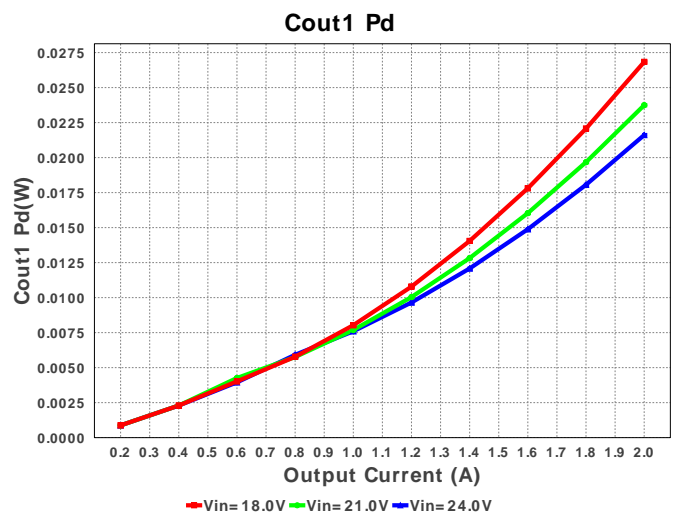
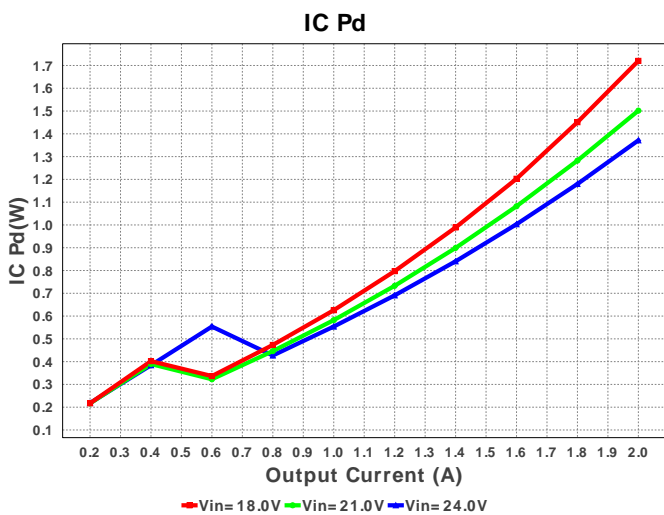
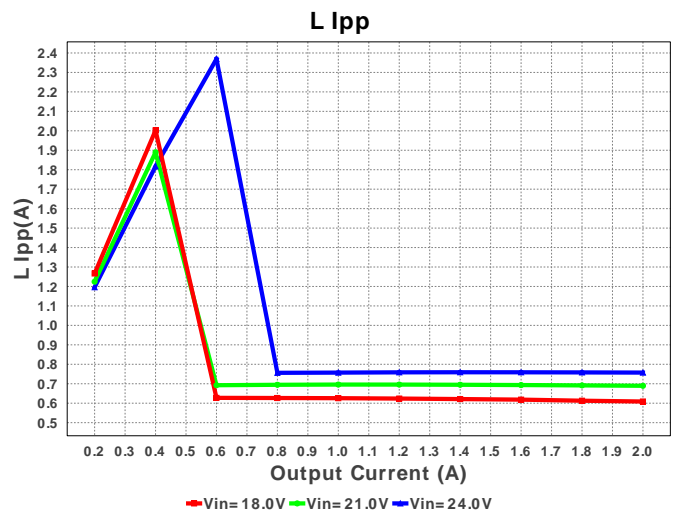
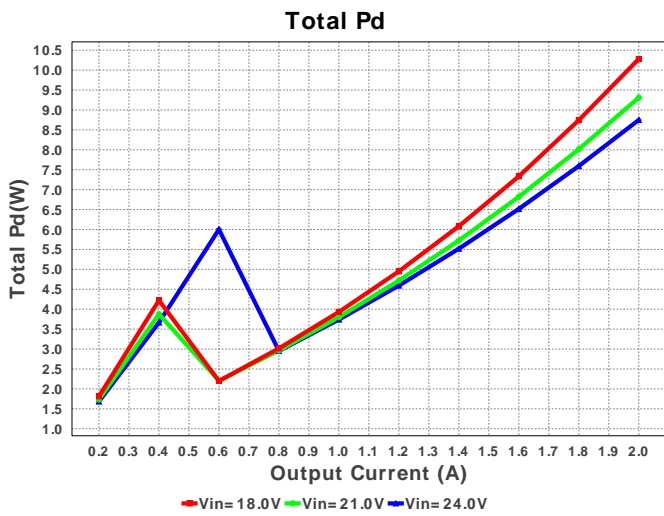
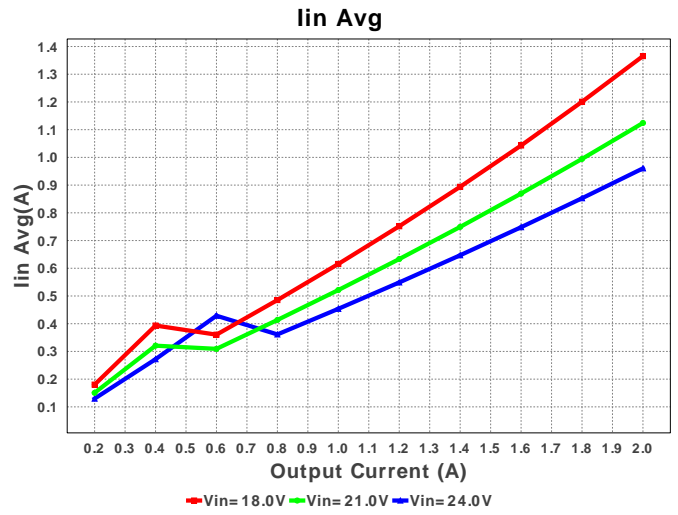
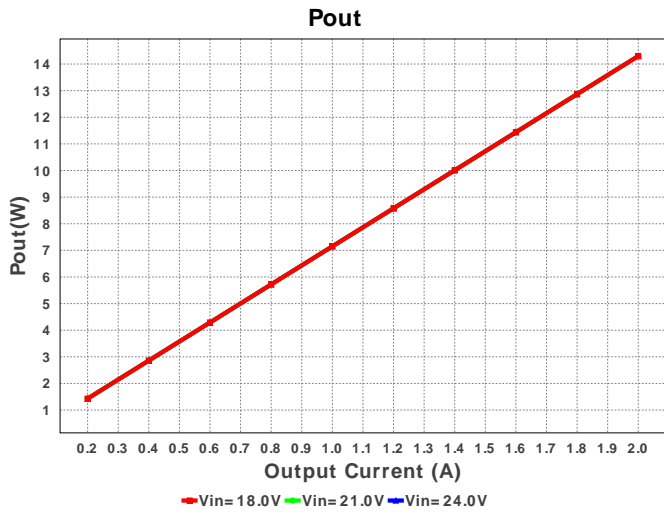
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
9.	Ds	CUSTOM	CUSTOM	VF@Io= 500.0 mV VRRM= 200.0 V	1	NA	CUSTOM 0 mm ²
10.	Dz	CUSTOM	CUSTOM	Zener	1	NA	CUSTOM 0 mm ²
11.	HeatSink	Aavid	577202B04000	Heatsink	1	\$3.22	 577202 224 mm ²
12.	Rcomp	Vishay-Dale	CRCW04022K94FKED Series= CRCW..e3	Res= 2.94 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
13.	Rfadj	Vishay-Dale	CRCW040246K4FKED Series= CRCW..e3	Res= 46.4 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
14.	Rfb1	Vishay-Dale	CRCW04021K00FKED Series= CRCW..e3	Res= 1000.0 Ohm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
15.	Rfb2	Vishay-Dale	CRCW04023K09FKED Series= CRCW..e3	Res= 3.09 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
16.	T1	CUSTOM	CUSTOM	Lp= 96.93 µH Rp= 230.144 mOhm Leakage_L= 1.939 µH Ns1toNp= 0.2 Rs1= 50.0 mOhms Ns2toNp= 0.143 Rs2= 66.0 mOhms Ns3toNp= 0.097 Rs3= 38.0 mOhms	1	NA	CUSTOM 0 mm ²
17.	U1	Texas Instruments	LM2586T-ADJ/NOPB	Switcher	1	\$3.10	 TA07B 121 mm ²

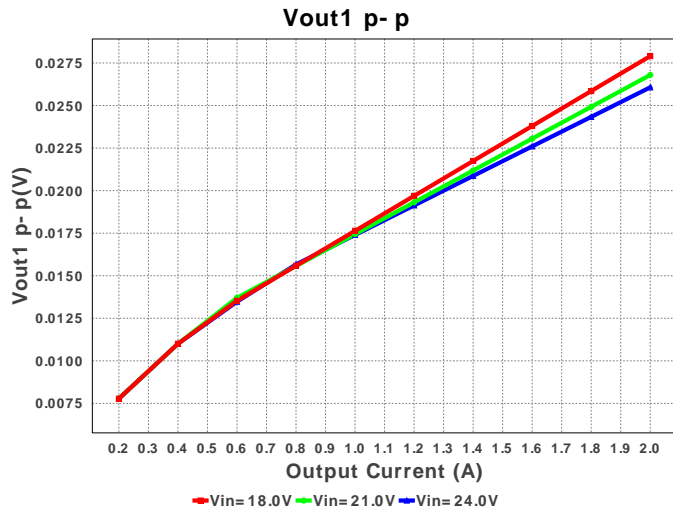












Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	816.231 mA	Current	Input capacitor RMS ripple current
2.	Cout1 IRMS	2.698 A	Current	Output capacitor1 RMS ripple current
3.	Cout2 IRMS	1.602 A	Current	Output capacitor2 RMS ripple current
4.	Cout3 IRMS	1.895 A	Current	Output capacitor3 RMS ripple current
5.	IC Ipk	2.447 A	Current	Peak switch current
6.	Iin Avg	1.587 A	Current	Average input current
7.	L Ipp	592.94 mA	Current	Peak-to-peak inductor ripple current
8.	BOM Count	23	General	Total Design BOM count
9.	FootPrint	1.653 k mm ²	General	Total Foot Print Area of BOM components
10.	Frequency	151.071 kHz	General	Switching frequency
11.	IC Tolerance	22.0 mV	General	IC Feedback Tolerance
12.	Pout	14.298 W	General	Total output power
13.	Total BOM	\$0.0	General	Total BOM Cost
14.	Vout1 OP	5.031 V	Op_Point	Operational Voltage 1
15.	Vout2 OP	2.764 V	Op_Point	Operational Voltage 2
16.	Vout3 OP	1.473 V	Op_Point	Operational Voltage 3
17.	Duty Cycle	73.562 %	Op_point	Duty cycle
18.	Efficiency	50.066 %	Op_point	Steady state efficiency
19.	IC Tj	96.539 degC	Op_point	IC junction temperature
20.	ICThetaJA	33.049 degC/W	Op_point	IC junction-to-ambient thermal resistance
21.	IOUT_OP	2.0 A	Op_point	Iout operating point
22.	VIN_OP	18.0 V	Op_point	Vin operating point
23.	Vout1 p-p	29.237 mV	Op_point	Peak-to-peak output1 ripple voltage
24.	Vout2 p-p	32.083 mV	Op_point	Peak-to-peak output2 ripple voltage
25.	Vout3 p-p	19.862 mV	Op_point	Peak-to-peak output3 ripple voltage
26.	Cin Pd	23.318 mW	Power	Input capacitor power dissipation
27.	Cout1 Pd	29.109 mW	Power	Output capacitor1 power dissipation
28.	Cout1 Pd	29.109 mW	Power	Output capacitor1 power dissipation
29.	Cout2 Pd	15.392 mW	Power	Output capacitor2 power dissipation
30.	Cout3 Pd	10.774 mW	Power	Output capacitor3 power dissipation
31.	Diode1 Pd	1.0 W	Power	Diode1 power dissipation
32.	Diode2 Pd	1.206 W	Power	Diode2 power dissipation
33.	Diode3 Pd	1.204 W	Power	Diode3 power dissipation
34.	IC Pd	2.013 W	Power	IC power dissipation
35.	Total Pd	14.261 W	Power	Total Power Dissipation
36.	Xformer Pd	1.424 W	Power	Transformer power dissipation
37.	Zener Pd	7.328 W	Power	Zener power dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	2.0	Maximum Output Current
2.	Iout1	2.0	Output Current #1
3.	Iout2	1.0	Output Current #2
4.	Iout3	1.0	Output Current #3
5.	VinMax	24.0	Maximum input voltage
6.	VinMin	18.0	Minimum input voltage
7.	Vout	5.0	Output Voltage
8.	Vout1	5.0	Output Voltage #1
9.	Vout2	3.3	Output Voltage #2
10.	Vout3	1.9	Output Voltage #3
11.	base_pn	LM2586	Texas Instruments Base Part Number

#	Name	Value	Description
12.	source	DC	Input Source Type
13.	ta	30.0	Ambient temperature

Design Assistance

1. LM2586 Product Folder : <http://www.ti.com/product/LM2586> : contains the data sheet and other resources.

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