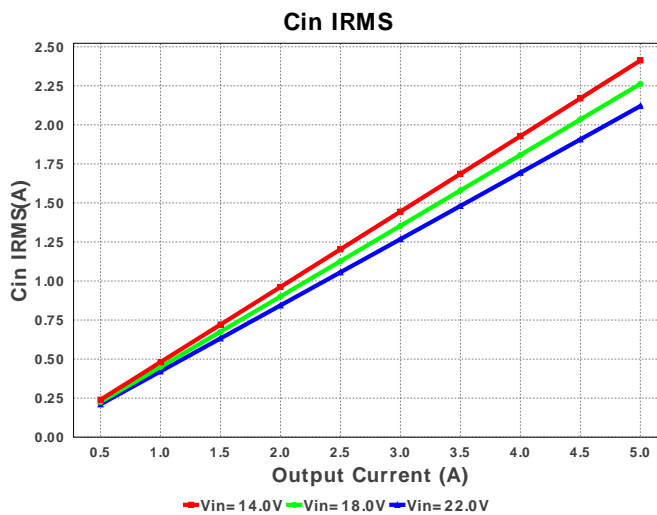
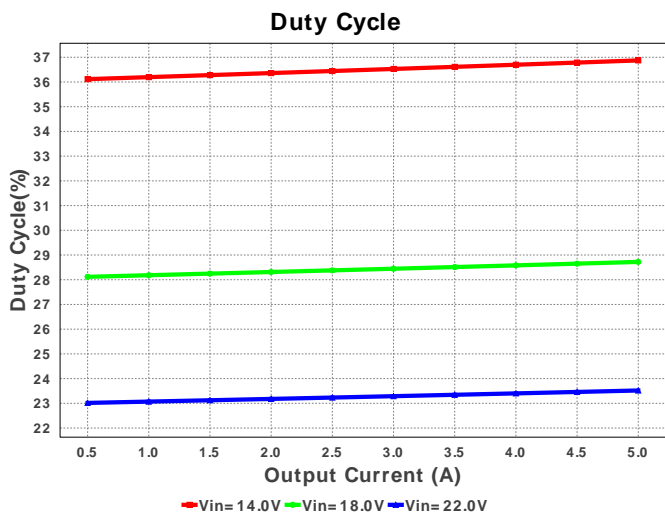
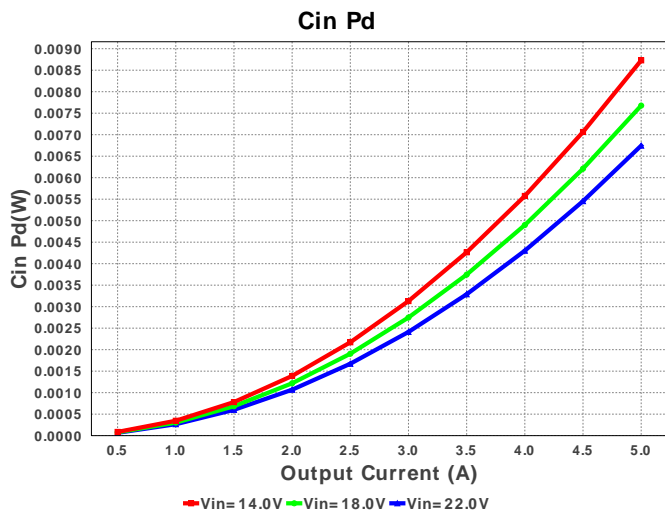
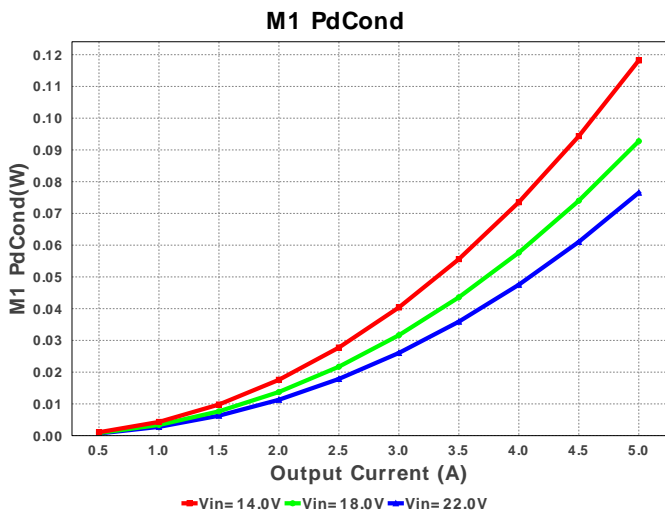
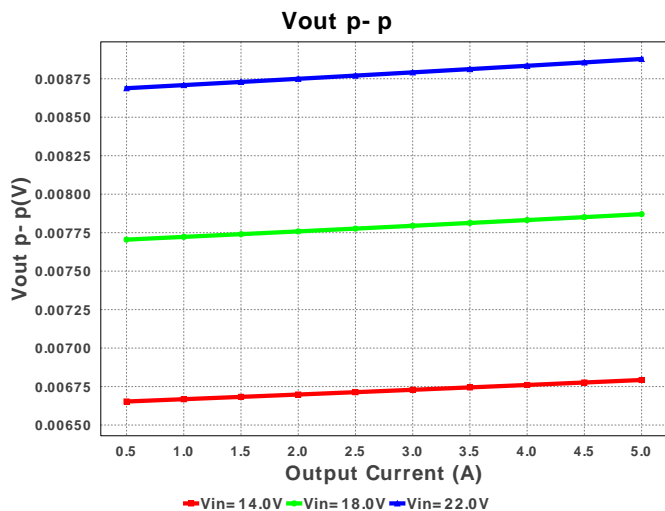
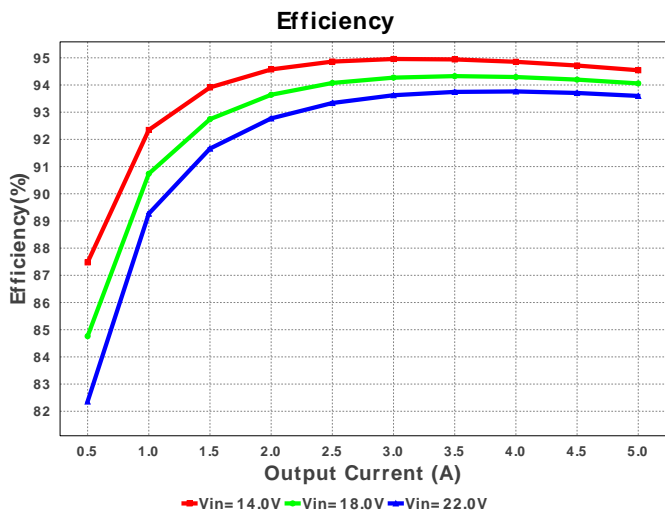
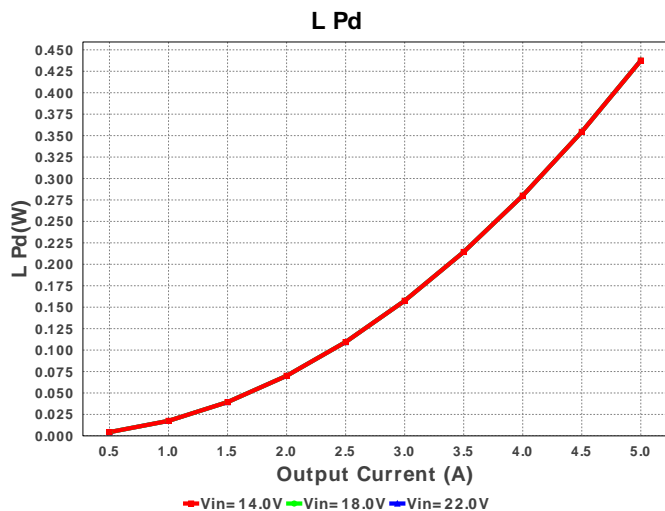
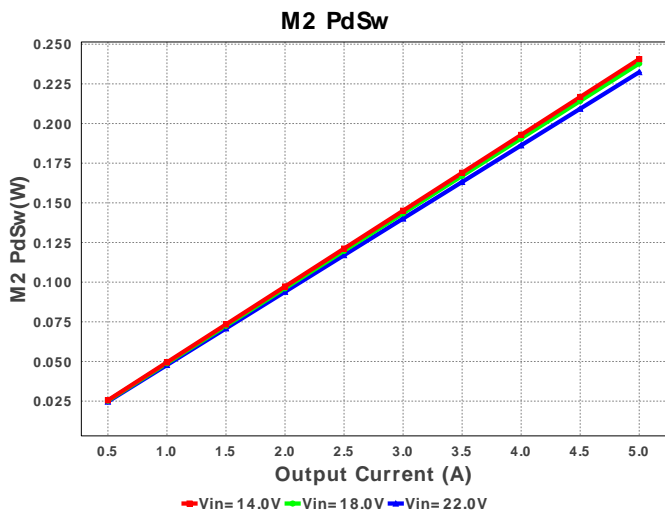
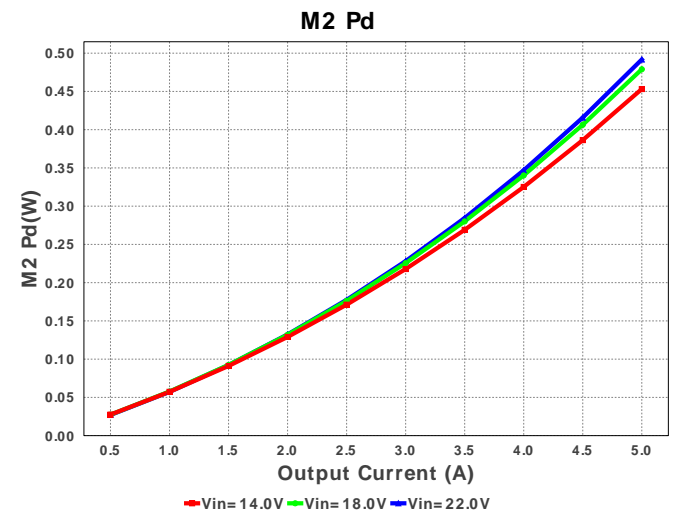
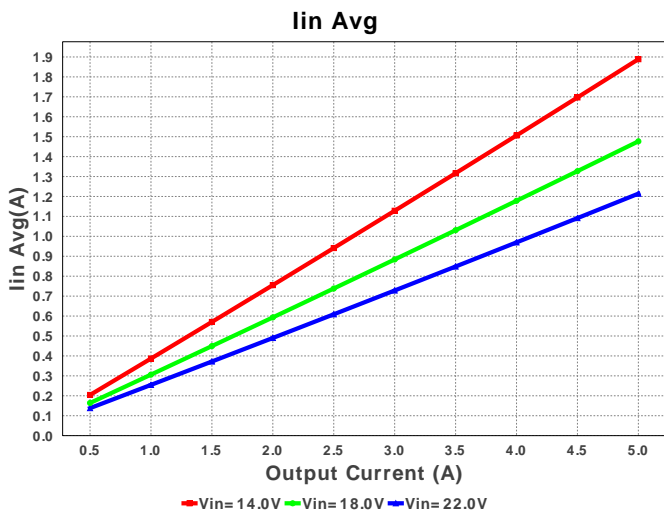
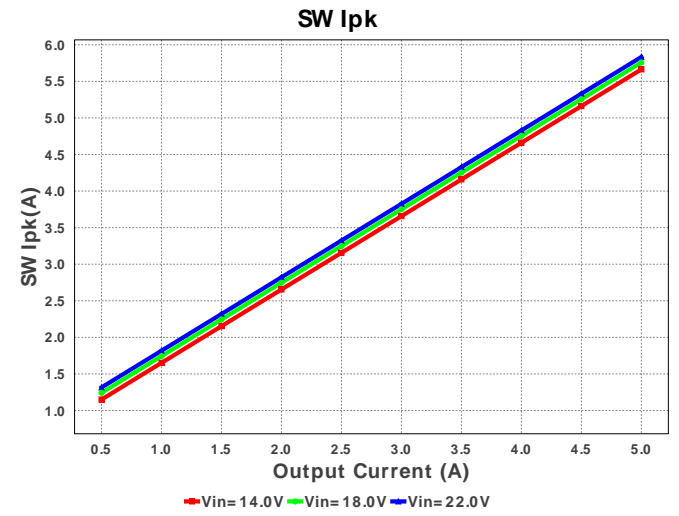
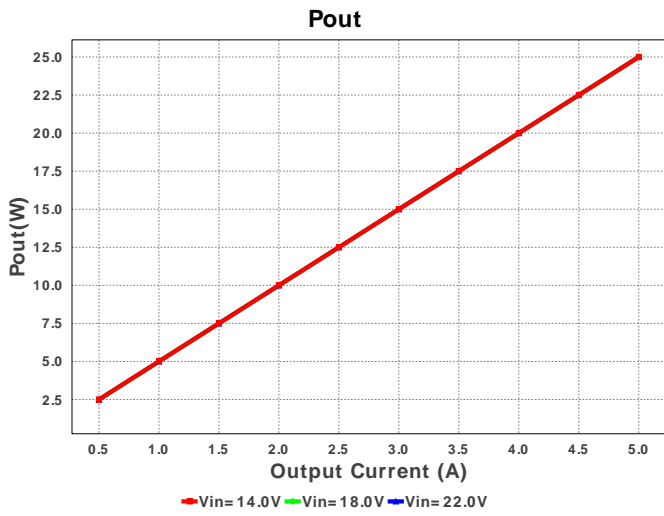
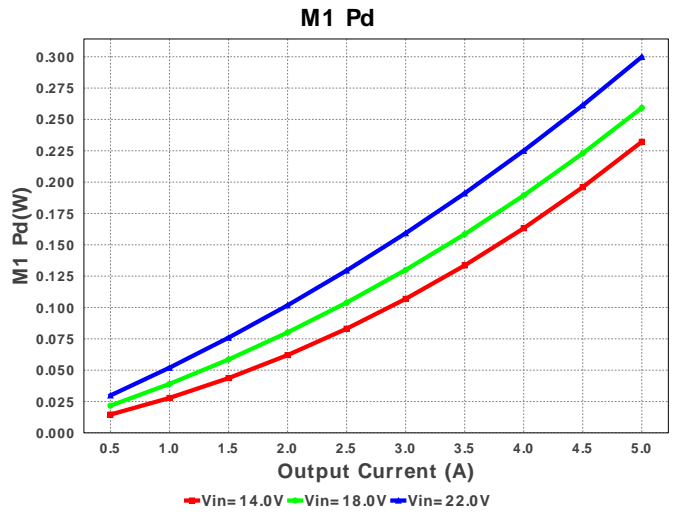
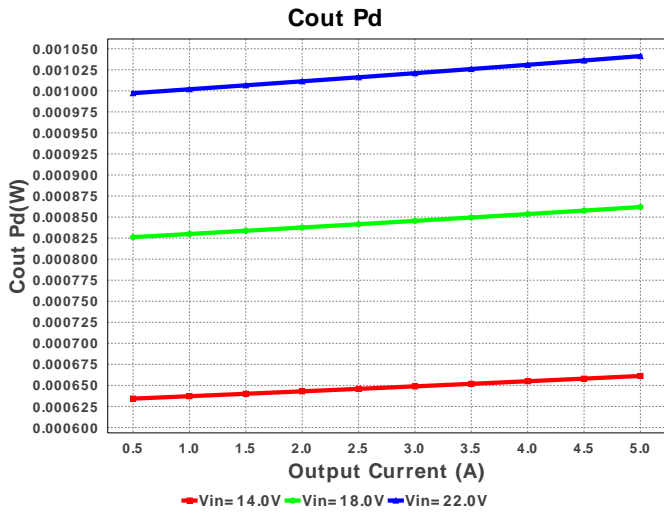


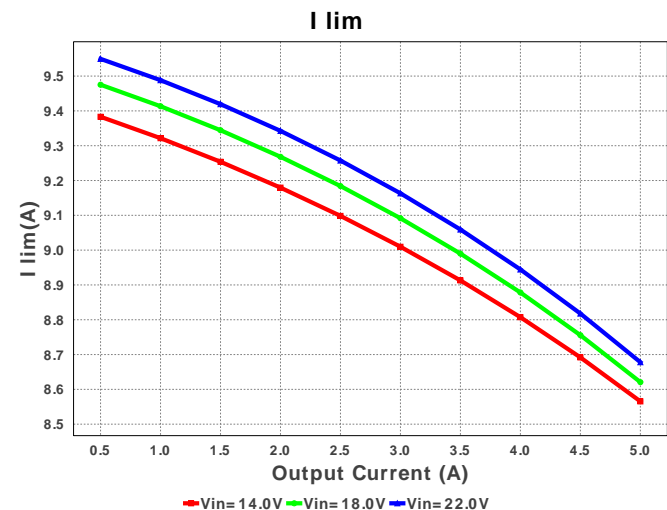
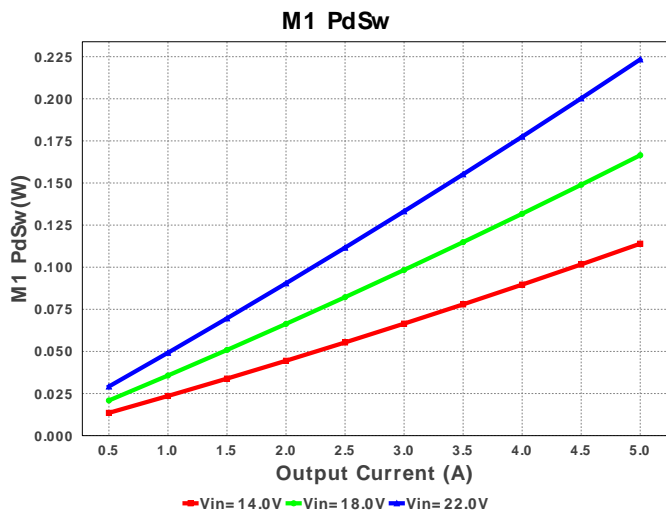
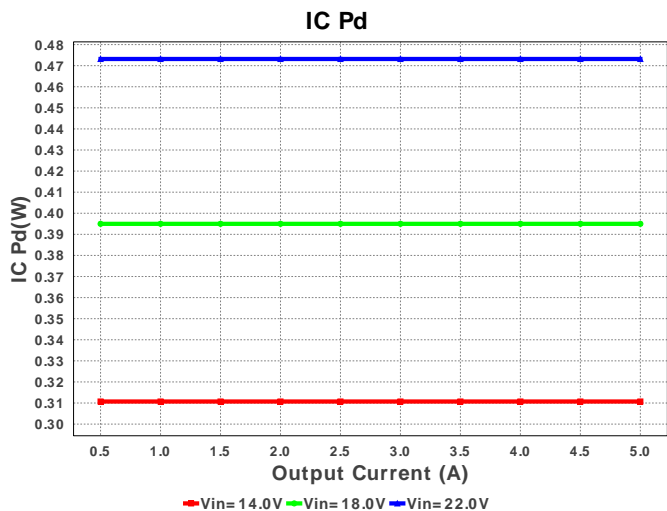
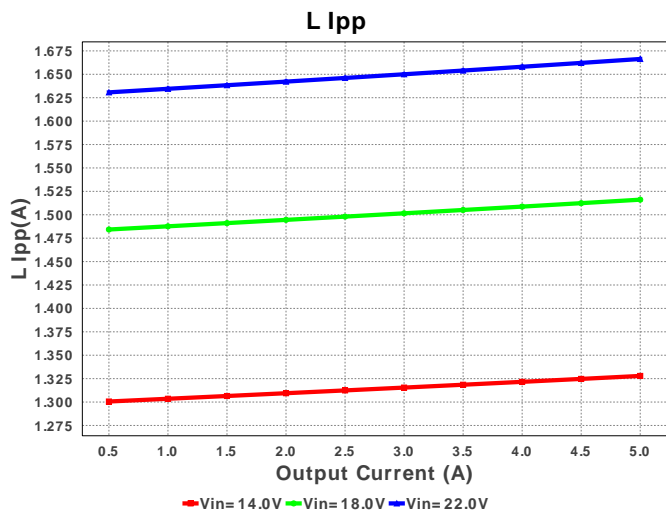
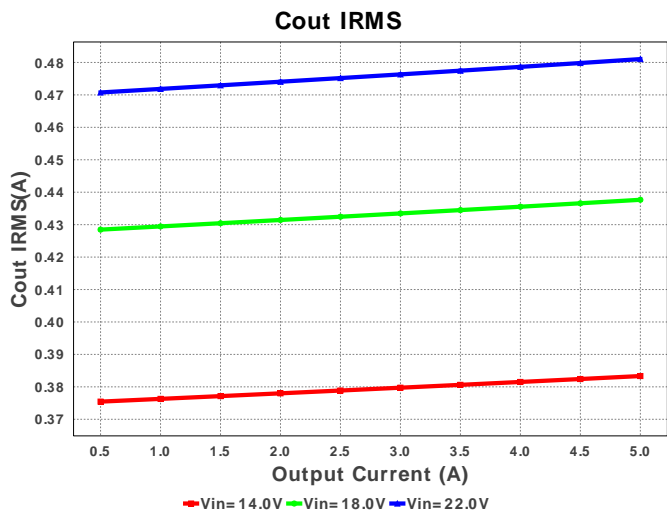
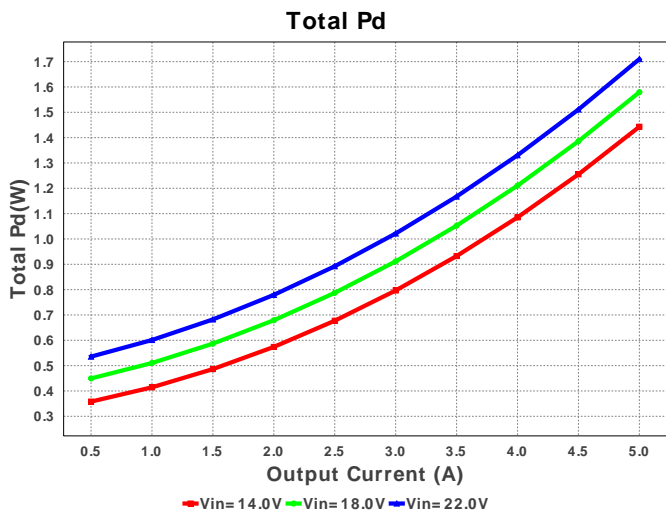


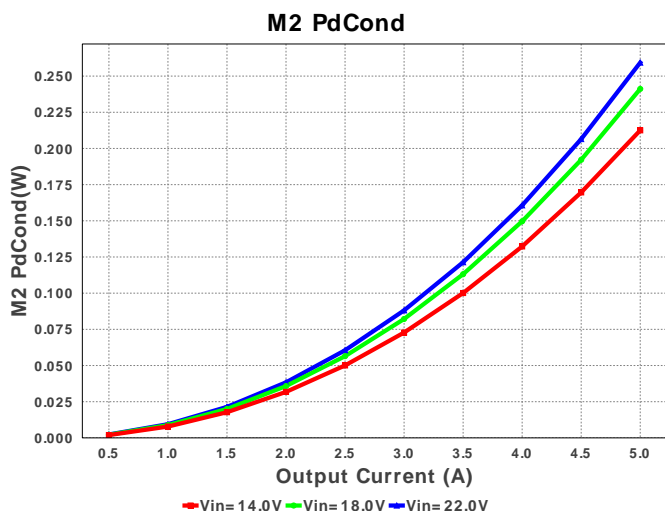
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
9.	L1	Bourns	SRR1208-4R5ML	L= 4.5 $\mu$ H DCR= 14.0 mOhm	1	\$0.37	 SRR1208 216 mm <sup>2</sup>
10.	M1	Texas Instruments	CSD17507Q5A	VdsMax= 30.0 V IdsMax= 65.0 Amps	1	\$0.34	 TRANS_NexFET_Q5A 55 mm <sup>2</sup>
11.	M2	Infineon Technologies	BSC067N06LS3 G	VdsMax= 60.0 V IdsMax= 50.0 Amps	1	\$0.40	 PG-TDSON-8 55 mm <sup>2</sup>
12.	Rfb1	Panasonic	ERJ-6ENF1002V Series= 225	Res= 10.0 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm <sup>2</sup>
13.	Rfb2	Panasonic	ERJ-6ENF7322V Series= 225	Res= 73.2 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm <sup>2</sup>
14.	Rilim	Panasonic	ERJ-6ENF1331V Series= 225	Res= 1.33 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm <sup>2</sup>
15.	Ron	Panasonic	ERJ-6ENF7872V Series= 225	Res= 78.7 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm <sup>2</sup>
16.	Rr	Panasonic	ERJ-6ENF2153V Series= 225	Res= 215.0 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm <sup>2</sup>
17.	U1	Texas Instruments	LM3150MH/NOPB	Switcher	1	\$1.86	 MXA14A 59 mm <sup>2</sup>











## Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	2.121 A	Current	Input capacitor RMS ripple current
2.	Cout IRMS	481.044 mA	Current	Output capacitor RMS ripple current
3.	I lim	8.664 A	Current	Current limit threshold
4.	Iin Avg	1.214 A	Current	Average input current
5.	L Ipp	1.666 A	Current	Peak-to-peak inductor ripple current
6.	SW Ipk	5.833 A	Current	Peak switch current
7.	BOM Count	19	General	Total Design BOM count
8.	FootPrint	495.0 mm <sup>2</sup>	General	Total Foot Print Area of BOM components
9.	Frequency	533.196 kHz	General	Switching frequency
10.	IC Tolerance	12.0 mV	General	IC Feedback Tolerance
11.	Pout	25.0 W	General	Total output power
12.	Total BOM	\$3.35	General	Total BOM Cost
13.	Duty Cycle	23.519 %	Op_point	Duty cycle
14.	Efficiency	93.569 %	Op_point	Steady state efficiency
15.	IOUT_OP	5.0 A	Op_point	Iout operating point
16.	VIN_OP	22.0 V	Op_point	Vin operating point
17.	Vout p-p	8.879 mV	Op_point	Peak-to-peak output ripple voltage
18.	Cin Pd	6.745 mW	Power	Input capacitor power dissipation
19.	Cout Pd	1.041 mW	Power	Output capacitor power dissipation
20.	IC Pd	473.171 mW	Power	IC power dissipation
21.	L Pd	437.5 mW	Power	Inductor power dissipation
22.	M1 Pd	300.078 mW	Power	M1 MOSFET total power dissipation
23.	M1 PdCond	76.703 mW	Power	M1 MOSFET conduction losses
24.	M1 PdSw	223.375 mW	Power	M1 MOSFET switching losses
25.	M2 Pd	499.823 mW	Power	M2 MOSFET total power dissipation
26.	M2 PdCond	259.805 mW	Power	M2 MOSFET conduction losses
27.	M2 PdSw	240.018 mW	Power	M2 MOSFET switching losses
28.	Total Pd	1.718 W	Power	Total Power Dissipation

## Design Inputs

#	Name	Value	Description
1.	Iout	5.0	Maximum Output Current
2.	Iout1	5.0	Output Current #1
3.	VinMax	22.0	Maximum input voltage
4.	VinMin	14.0	Minimum input voltage
5.	Vout	5.0	Output Voltage
6.	Vout1	5.0	Output Voltage #1
7.	base_pn	LM3150	Texas Instruments Base Part Number
8.	source	DC	Input Source Type
9.	ta	30.0	Ambient temperature

## Design Assistance

1. LM3150 Product Folder : <http://www.ti.com/product/LM3150> : contains the data sheet and other resources.

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