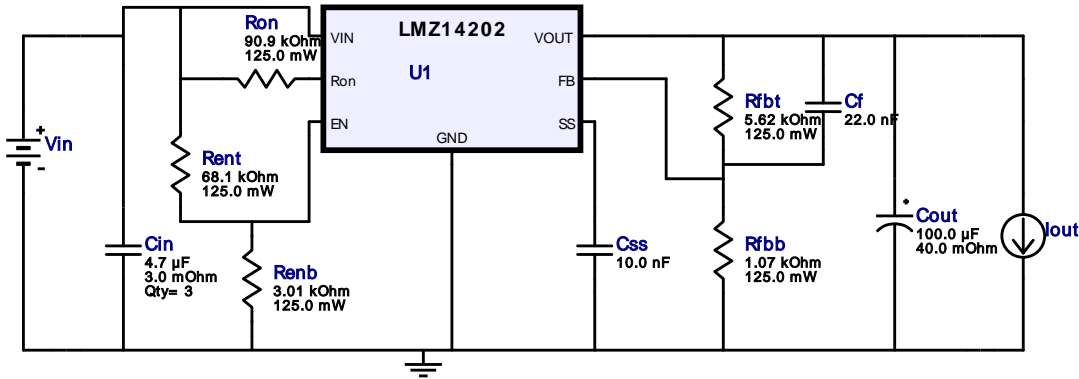


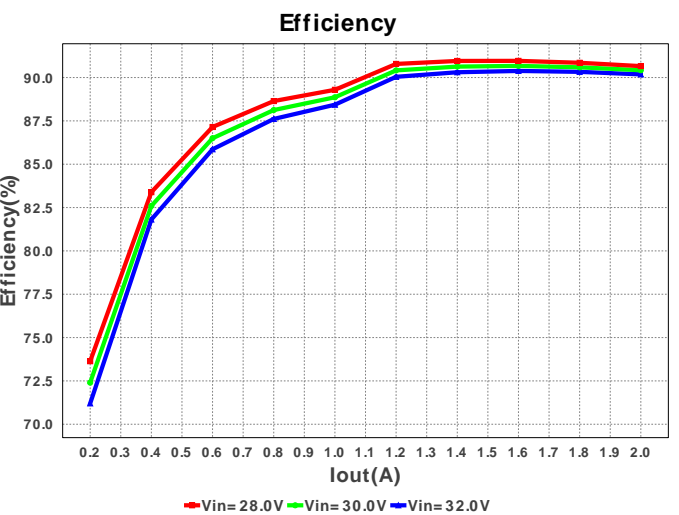
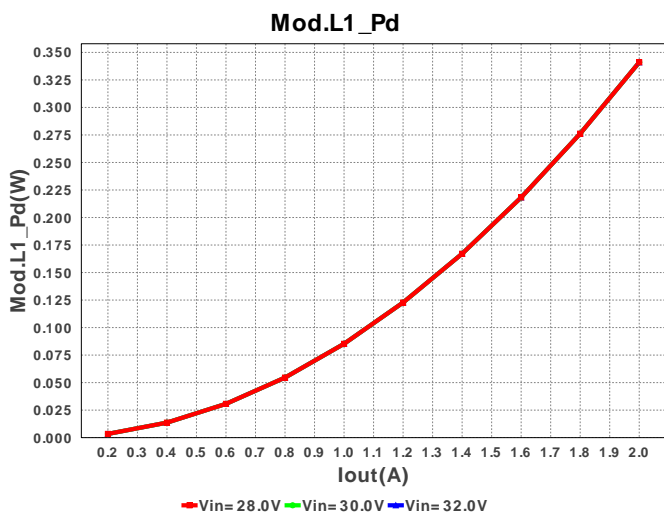
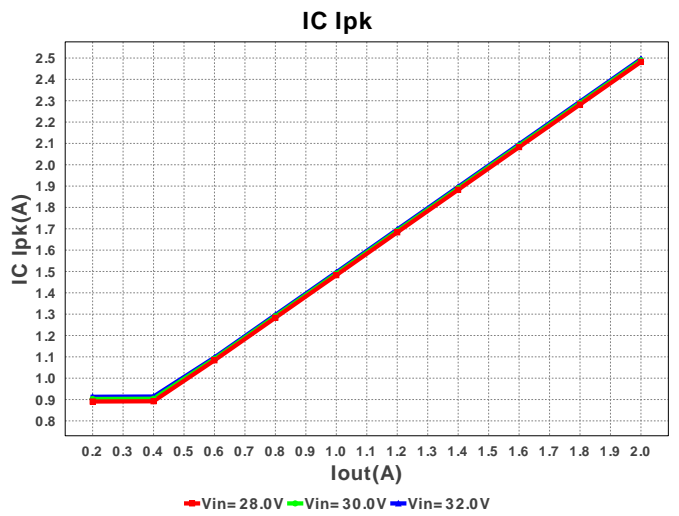
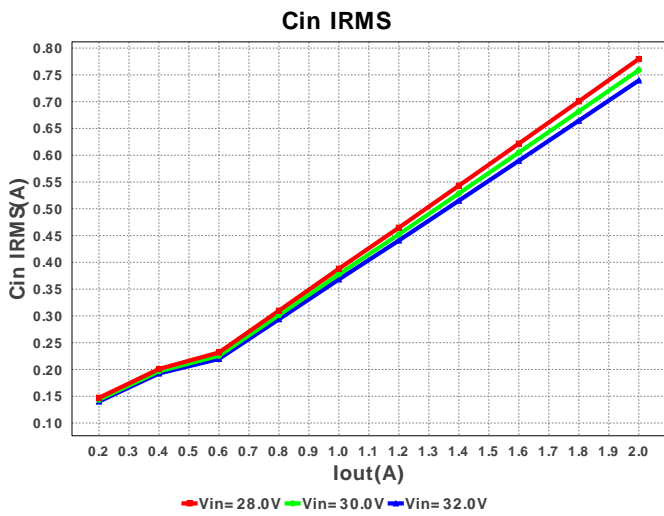
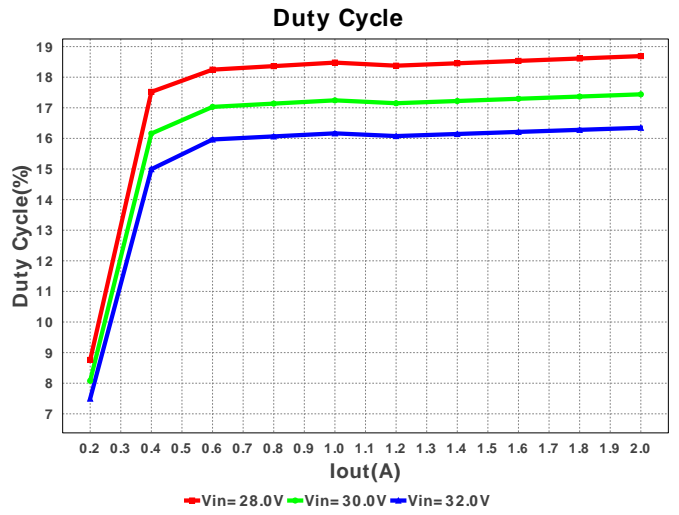
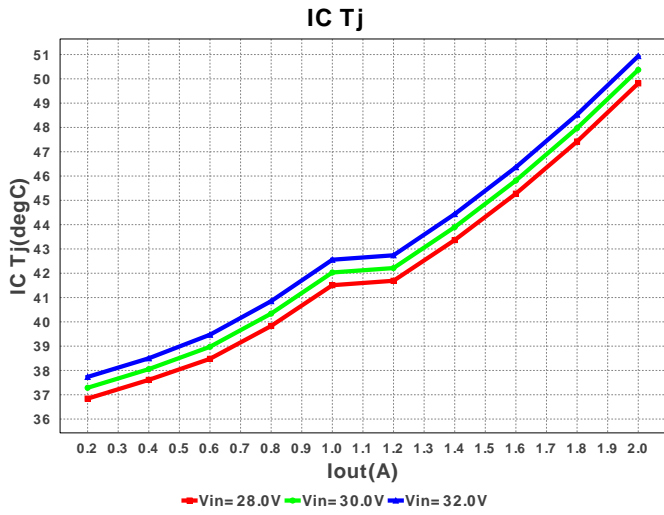
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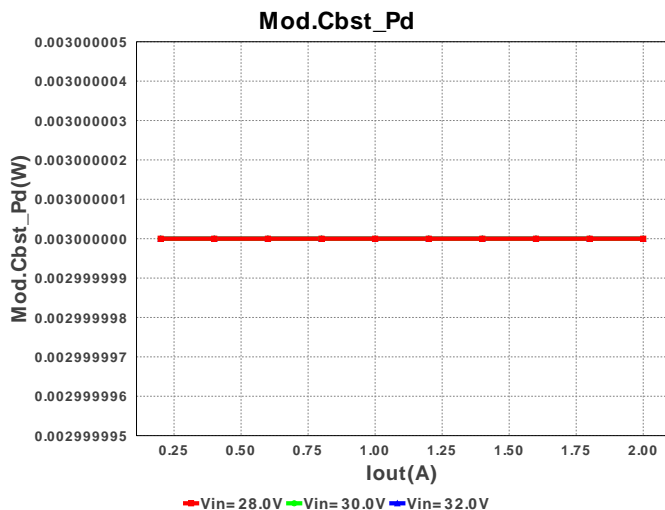
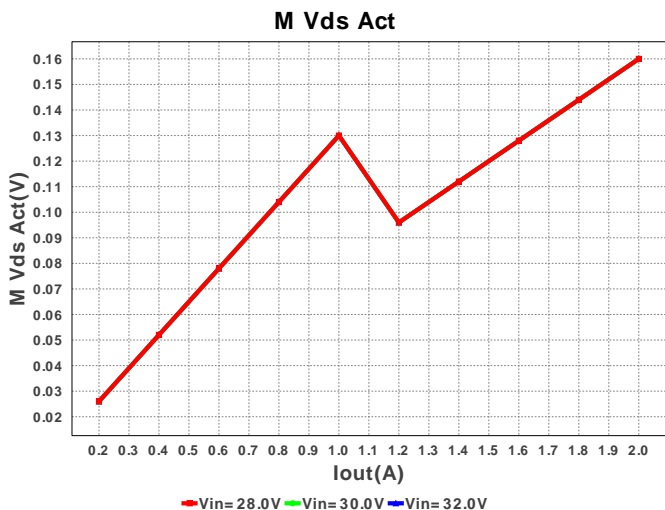
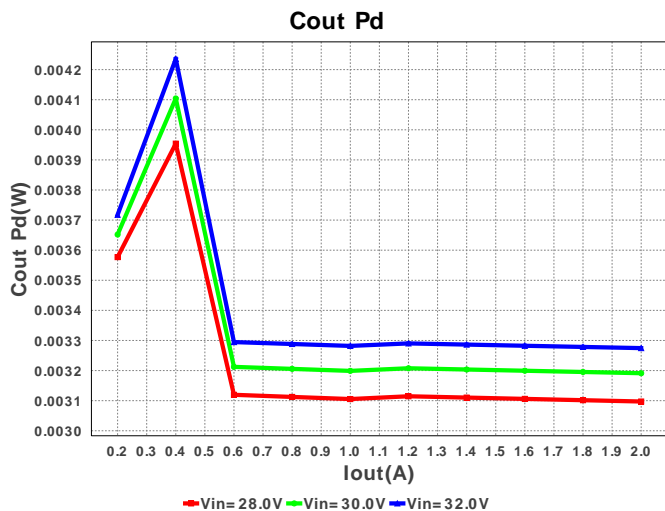
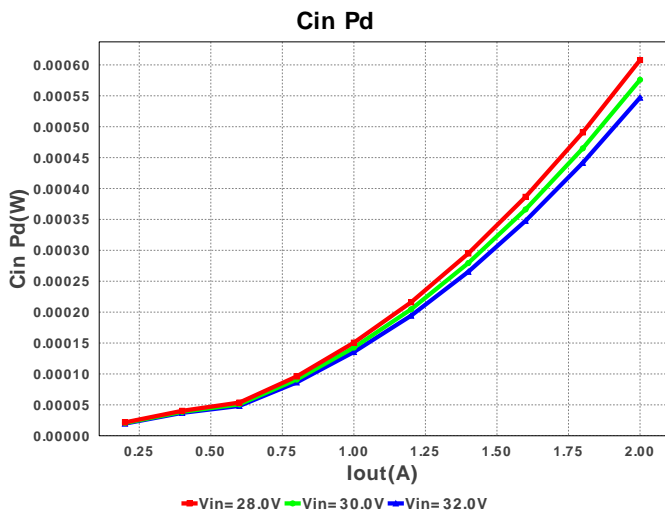
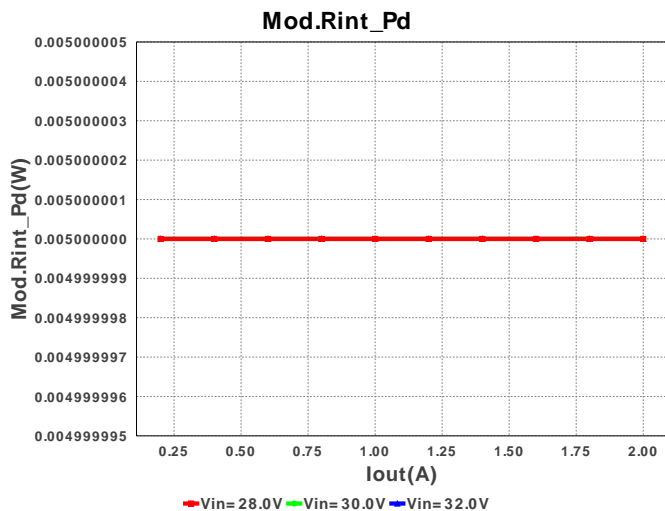
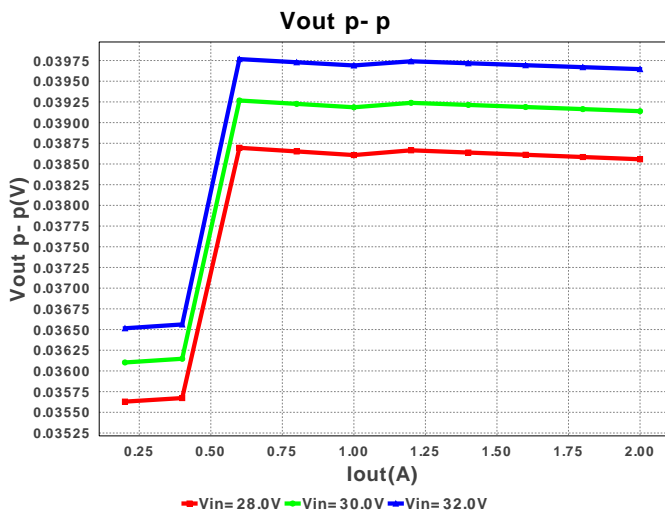
 Design : 3528838/26 LMZ14202TZ-ADJ/NOPB
 LMZ14202TZ-ADJ/NOPB 28.0V-32.0V to 5.0V @ 2.0A
 VinMax = 32.0V

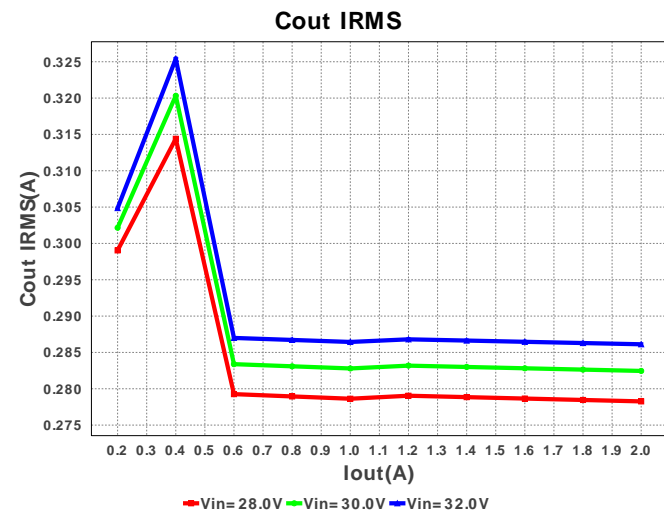
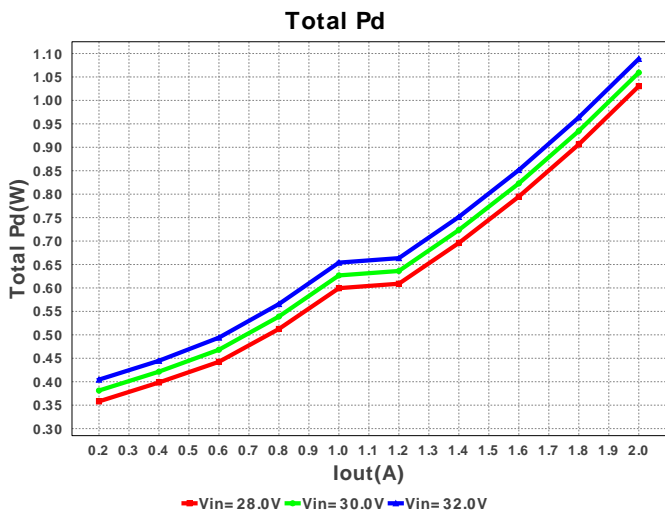
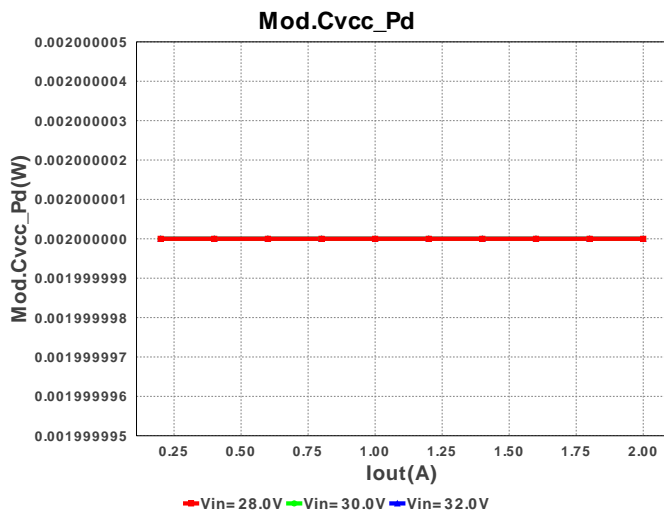
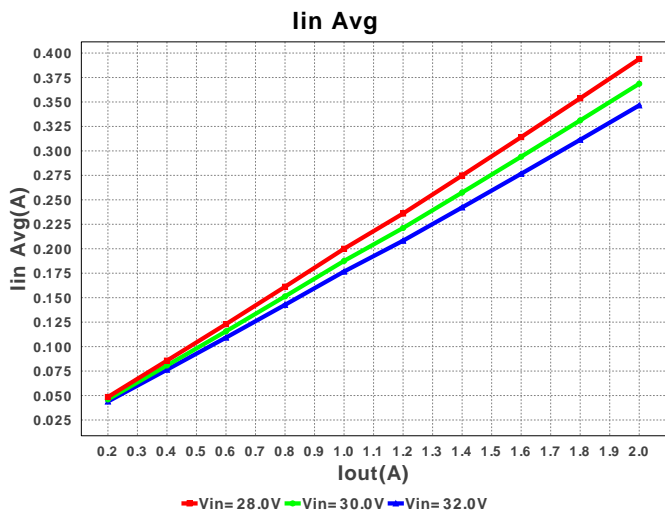
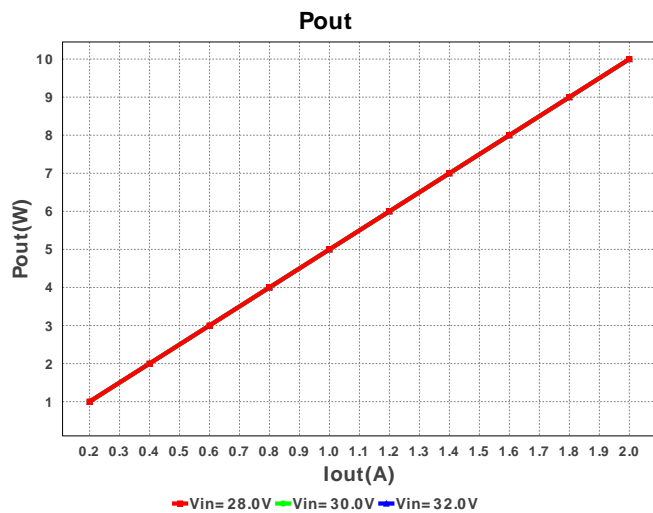
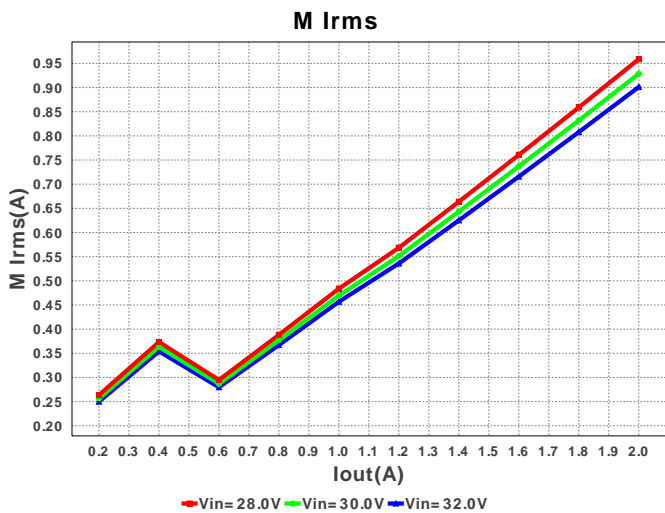
IOUT = 2.0A

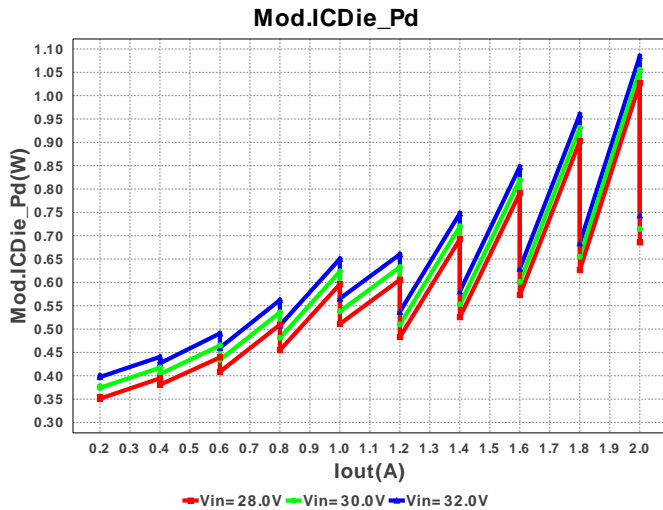

Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cf	Yageo America	CC0805KRX7R9BB223 Series= X7R	Cap= 22.0 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	 0805 7mm2
2.	Cin	MuRata	GRM31CR71H475KA12L Series= X7R	Cap= 4.7 uF ESR= 3.0 mOhm VDC= 50.0 V IRMS= 4.98 A	3	\$0.10	 1206 11mm2
3.	Cout	Panasonic	6SVP100M Series= 261	Cap= 100.0 uF ESR= 40.0 mOhm VDC= 6.3 V IRMS= 1.81 A	1	\$0.42	 SM_RADIAL_6.3AMM 80mm2
4.	Css	MuRata	GRM216R71H103KA01D Series= X7R	Cap= 10.0 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	 0805 7mm2
5.	Renb	Panasonic	ERJ-6ENF3011V Series= 225	Res= 3.01 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7mm2
6.	Rent	Panasonic	ERJ-6ENF6812V Series= 225	Res= 68.1 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7mm2
7.	Rfbb	Panasonic	ERJ-6ENF1071V Series= 225	Res= 1.07 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7mm2
8.	Rfbt	Panasonic	ERJ-6ENF5621V Series= 225	Res= 5.62 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7mm2
9.	Ron	Panasonic	ERJ-6ENF9092V Series= 225	Res= 90.9 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7mm2
10.	U1	Texas Instruments	LMZ14202TZ-ADJ/NOPB	Switcher	1	\$7.76	 TZA07A 199mm2









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	739.594 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	286.121 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	2.496 A	Current	Peak switch current in IC
4.	Iin Avg	342.98 mA	Current	Average input current
5.	M Irms	892.362 mA	Current	MOSFET RMS current
6.	BOM Count	12	General	Total Design BOM count
7.	FootPrint	359.0 mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	442.68 kHz	General	Switching frequency
9.	IC Tolerance	20.0 mV	General	IC Feedback Tolerance
10.	M Vds Act	160.0 mV	General	Voltage drop across the MosFET
11.	Pout	10.0 W	General	Total output power
12.	Total BOM	\$8.54	General	Total BOM Cost
13.	Vout OP	5.0 V	Op_Point	Operational Output Voltage
14.	Duty Cycle	16.347 %	Op_point	Duty cycle
15.	Efficiency	91.114 %	Op_point	Steady state efficiency
16.	IC Tj	48.749 degC	Op_point	IC junction temperature
17.	ICThetaJA	19.3 degC/W	Op_point	IC junction-to-ambient thermal resistance
18.	IOUT_OP	2.0 A	Op_point	Iout operating point
19.	VIN_OP	32.0 V	Op_point	Vin operating point
20.	Vout p-p	39.646 mV	Op_point	Peak-to-peak output ripple voltage
21.	Cin Pd	546.999 μ W	Power	Input capacitor power dissipation
22.	Cout Pd	3.275 mW	Power	Output capacitor power dissipation
23.	Total Pd	975.27 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	2.0 A	Maximum Output Current
2.	Iout1	2.0 Amps	Output Current #1
3.	SoftStart	1.0 ms	Soft Start Time (ms)
4.	VinMax	32.0 V	Maximum input voltage
5.	VinMin	28.0 V	Minimum input voltage
6.	Vout	5.0 V	Output Voltage
7.	Vout1	5.0 Volt	Output Voltage #1
8.	base_pn	LMZ14202	Texas Instruments Base Part Number
9.	source	DC	Input Source Type
10.	ta	30.0 degC	Ambient temperature

Design Assistance

1. LMZ14202 Product Folder : <http://www.ti.com/product/lmz14202> : contains the data sheet and other resources.

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