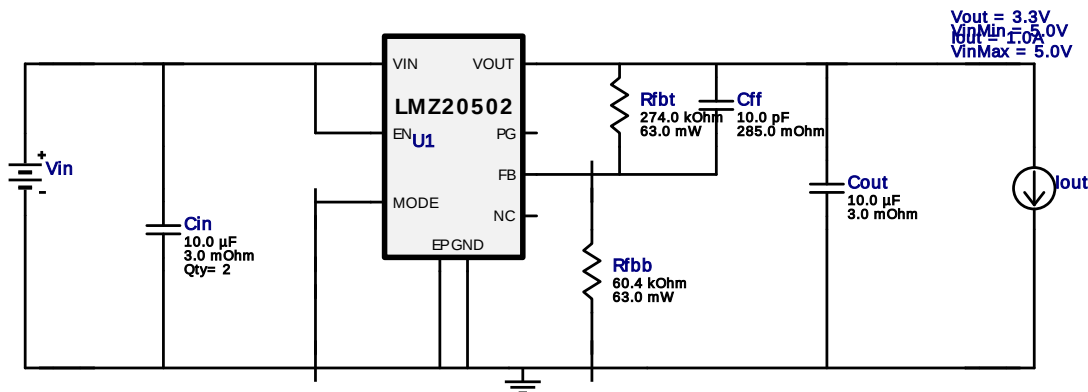


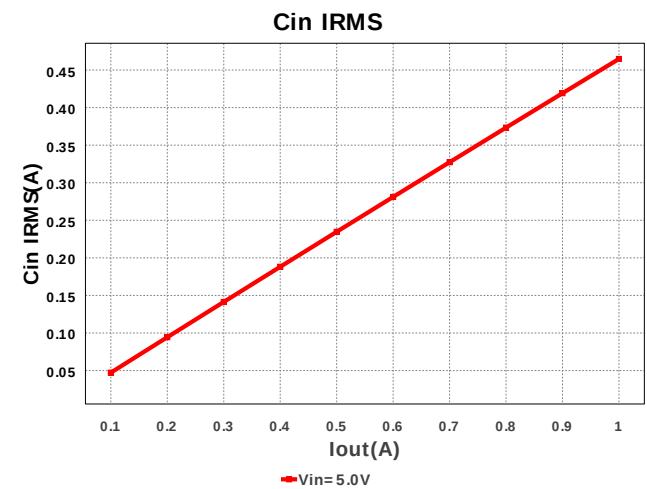
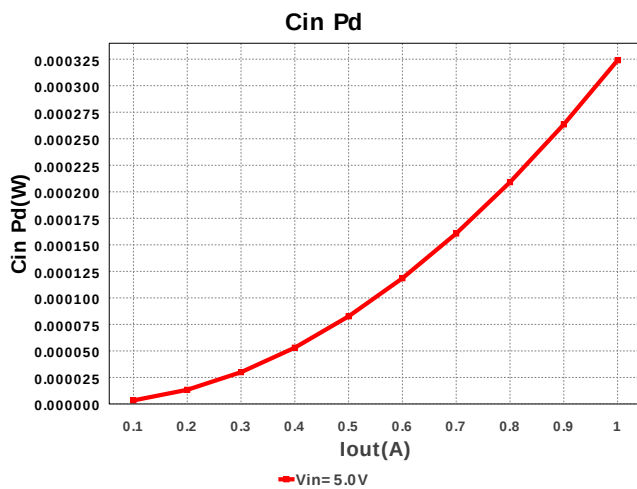
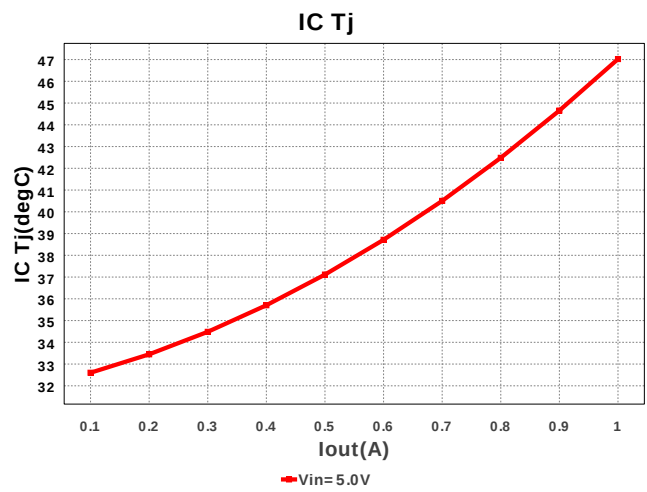
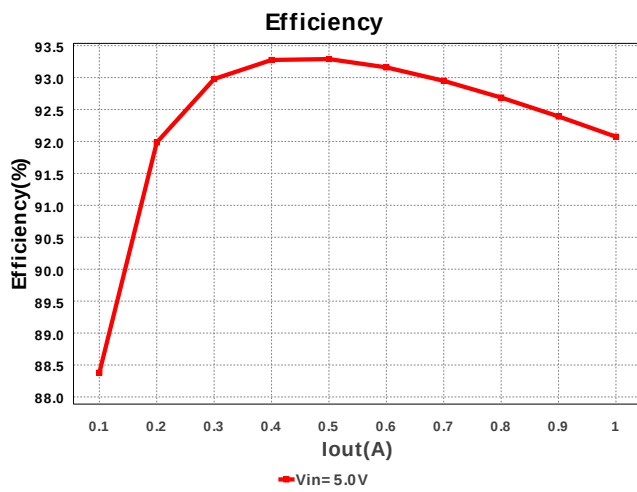
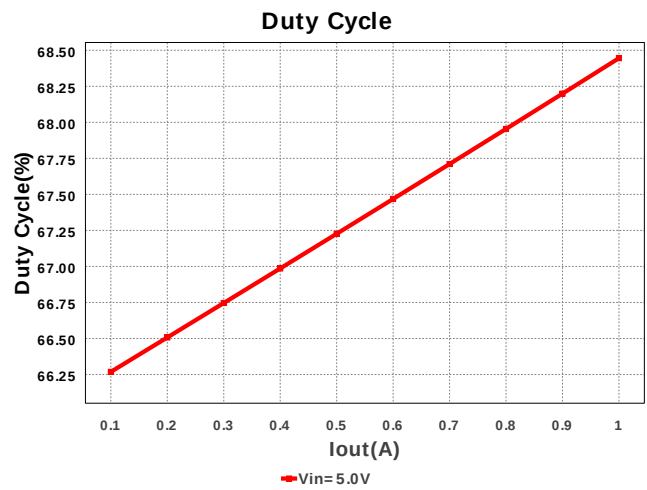
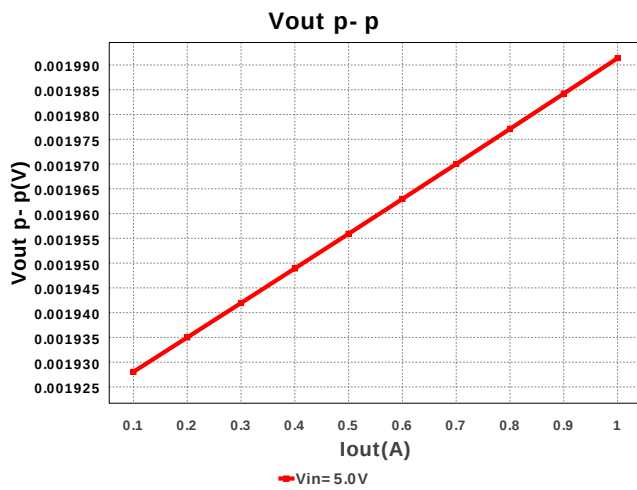
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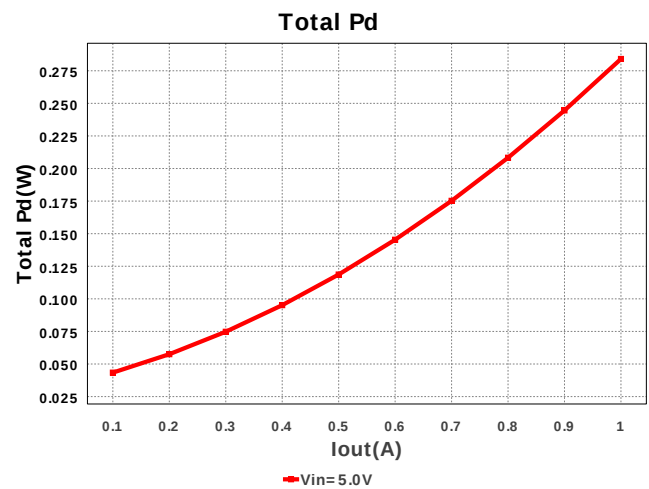
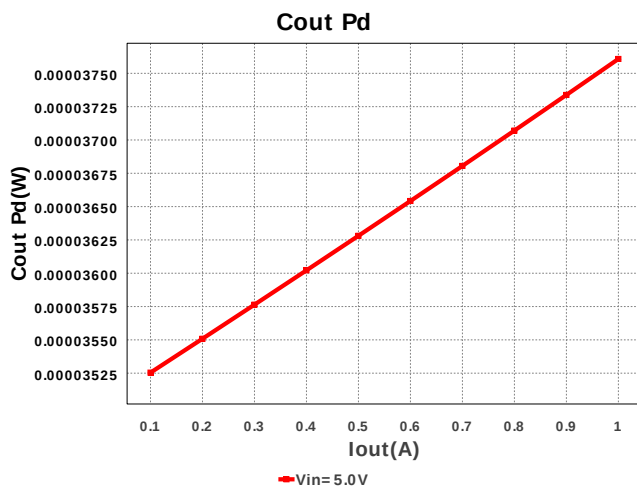
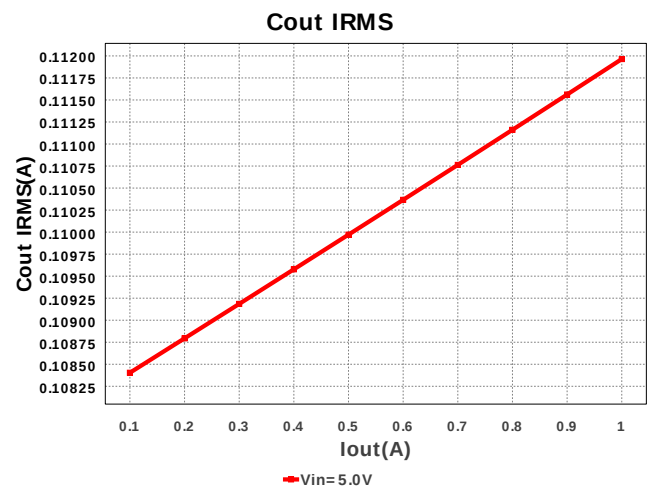
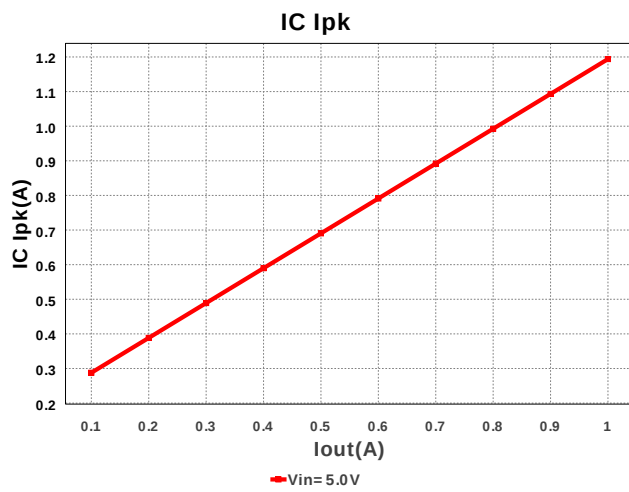
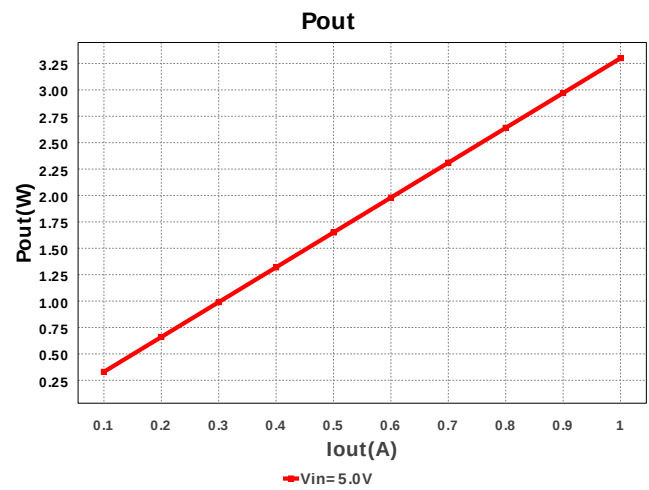
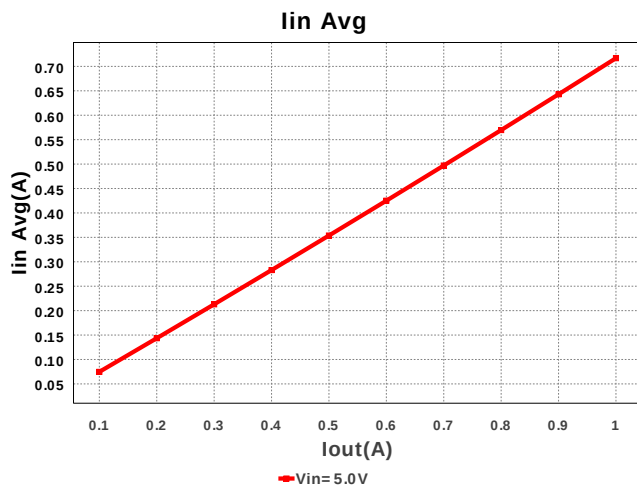
Design : 3495039/165 LMZ20502SILR
LMZ20502SILR 5.0V-5.0V to 3.3V @ 1.0A

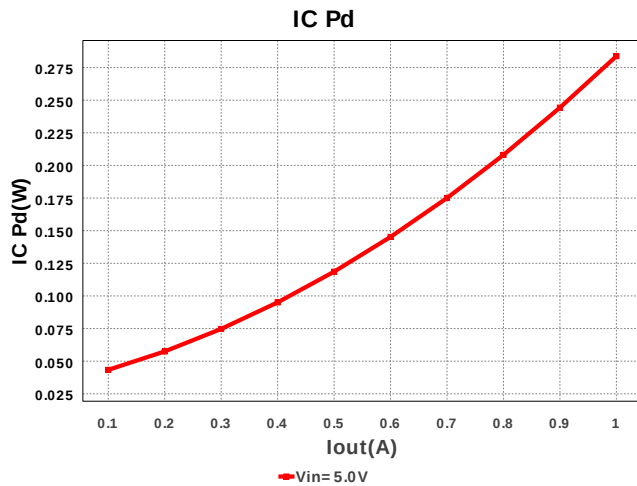


Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cff	Kemet	C0805C100J5GACTU Series= C0G/NP0	Cap= 10.0 pF ESR= 285.0 mOhm VDC= 50.0 V IRMS= 221.0 mA	1	\$0.01	0805 7mm2
2.	Cin	Kemet	C0805C106K8PACTU Series= X5R	Cap= 10.0 µF ESR= 3.0 mOhm VDC= 10.0 V IRMS= 11.43 A	2	\$0.05	0805 7mm2
3.	Cout	Kemet	C0805C106K8PACTU Series= X5R	Cap= 10.0 µF ESR= 3.0 mOhm VDC= 10.0 V IRMS= 11.43 A	1	\$0.05	0805 7mm2
4.	Rfbb	Vishay-Dale	CRCW040260K4FKED Series= CRCW..e3	Res= 60.4 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3mm2
5.	Rf1	Vishay-Dale	CRCW0402274KFKED Series= CRCW..e3	Res= 274.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3mm2
6.	U1	Texas Instruments	LMZ20502SILR	Switcher	1	NA	SYB08A 20mm2







Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	464.734 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	111.964 mA	Current	Output capacitor RMS ripple current
3.	IC IpK	1.194 A	Current	Peak switch current in IC
4.	Iin Avg	716.81 mA	Current	Average input current
5.	BOM Count	7	General	Total Design BOM count
6.	FootPrint	78.0 mm ²	General	Total Foot Print Area of BOM components
7.	Frequency	3.0 MHz	General	Switching frequency
8.	IC Tolerance	6.0 mV	General	IC Feedback Tolerance
9.	Pout	3.3 W	General	Total output power
10.	Total BOM	\$0.0	General	Total BOM Cost
11.	Vout OP	3.3 V	Op_Point	Operational Output Voltage
12.	Duty Cycle	68.445 %	Op_point	Duty cycle
13.	Efficiency	92.074 %	Op_point	Steady state efficiency
14.	IC Tj	47.023 degC	Op_point	IC junction temperature
15.	IC ThetaJA	60.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
16.	IOUT_OP	1.0 A	Op_point	Iout operating point
17.	VIN_OP	5.0 V	Op_point	Vin operating point
18.	Vout p-p	1.991 mV	Op_point	Peak-to-peak output ripple voltage
19.	Cin Pd	323.967 μ W	Power	Input capacitor power dissipation
20.	Cout Pd	37.608 μ W	Power	Output capacitor power dissipation
21.	IC Pd	283.71 mW	Power	IC power dissipation
22.	Total Pd	284.072 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	1.0 A	Maximum Output Current
2.	Iout1	1.0 Amps	Output Current #1
3.	VinMax	5.0 V	Maximum input voltage
4.	VinMin	5.0 V	Minimum input voltage
5.	Vout	3.3 V	Output Voltage
6.	Vout1	3.3 Volt	Output Voltage #1
7.	base_pn	LMZ20502	Base Product Number
8.	source	DC	Input Source Type
9.	Ta	30.0 degC	Ambient temperature

Design Assistance

1. **LMZ20502** Product Folder : <http://www.ti.com/product/lmz20502> : contains the data sheet and other resources.

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