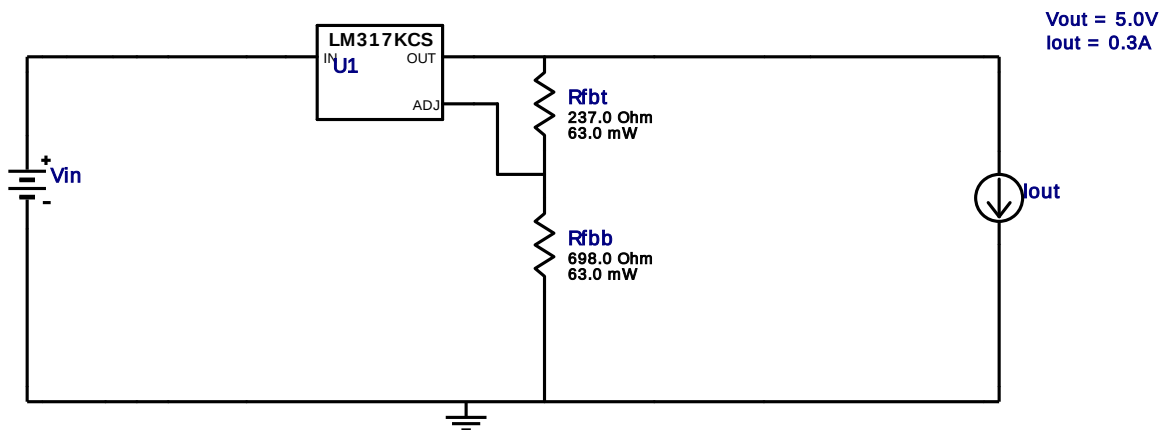
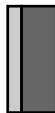


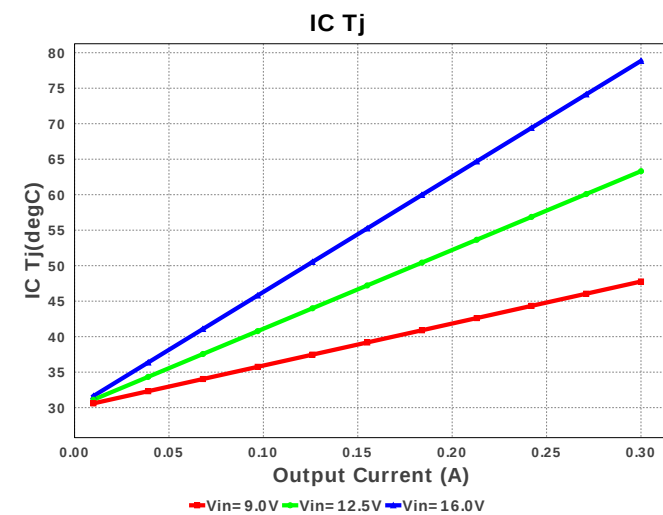
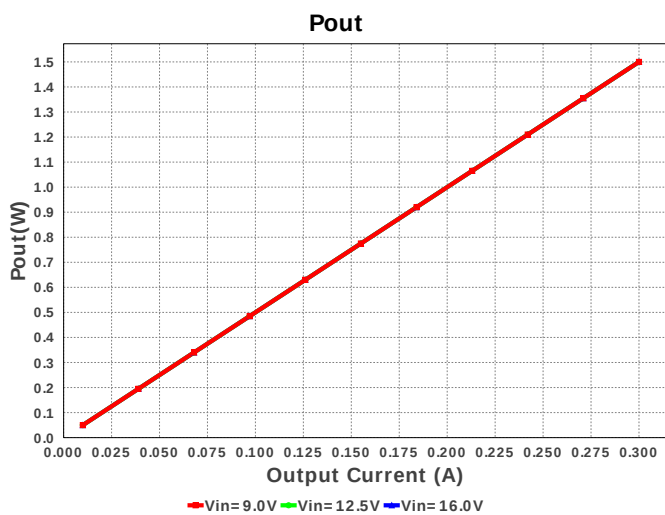
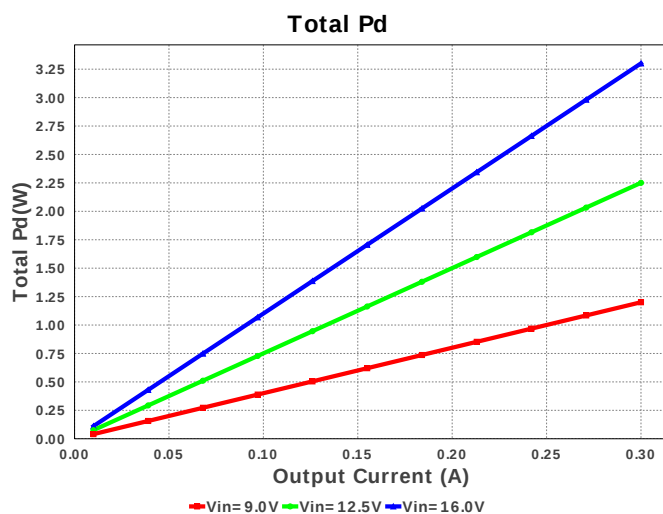
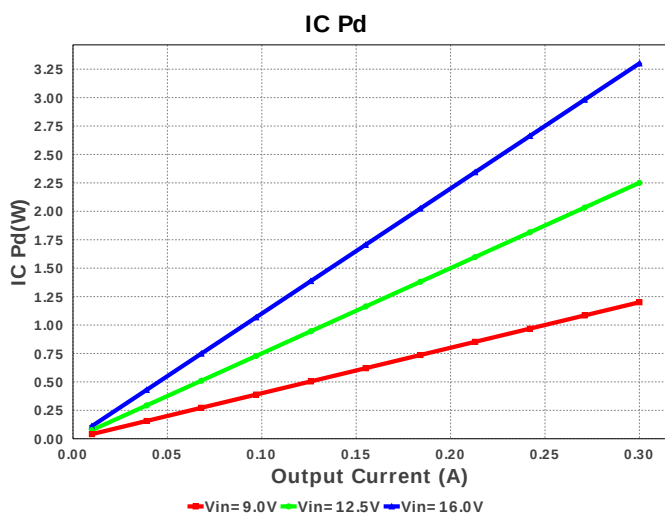
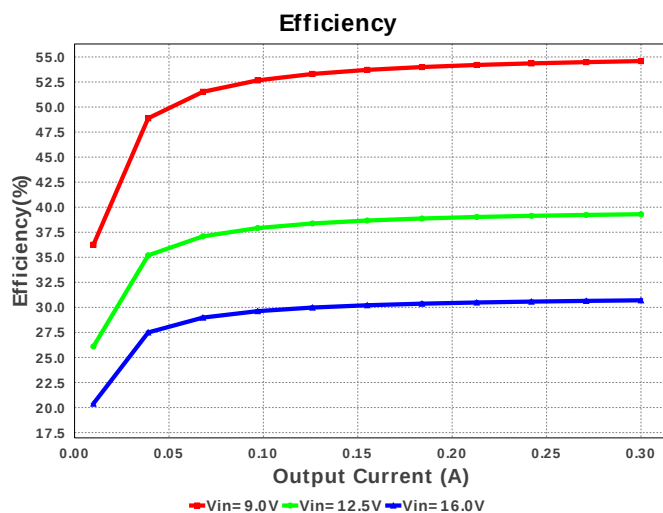
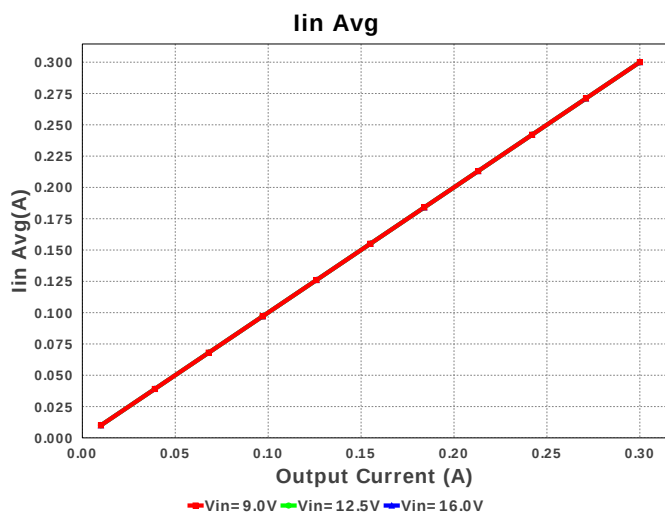
WEBENCH® Design Report

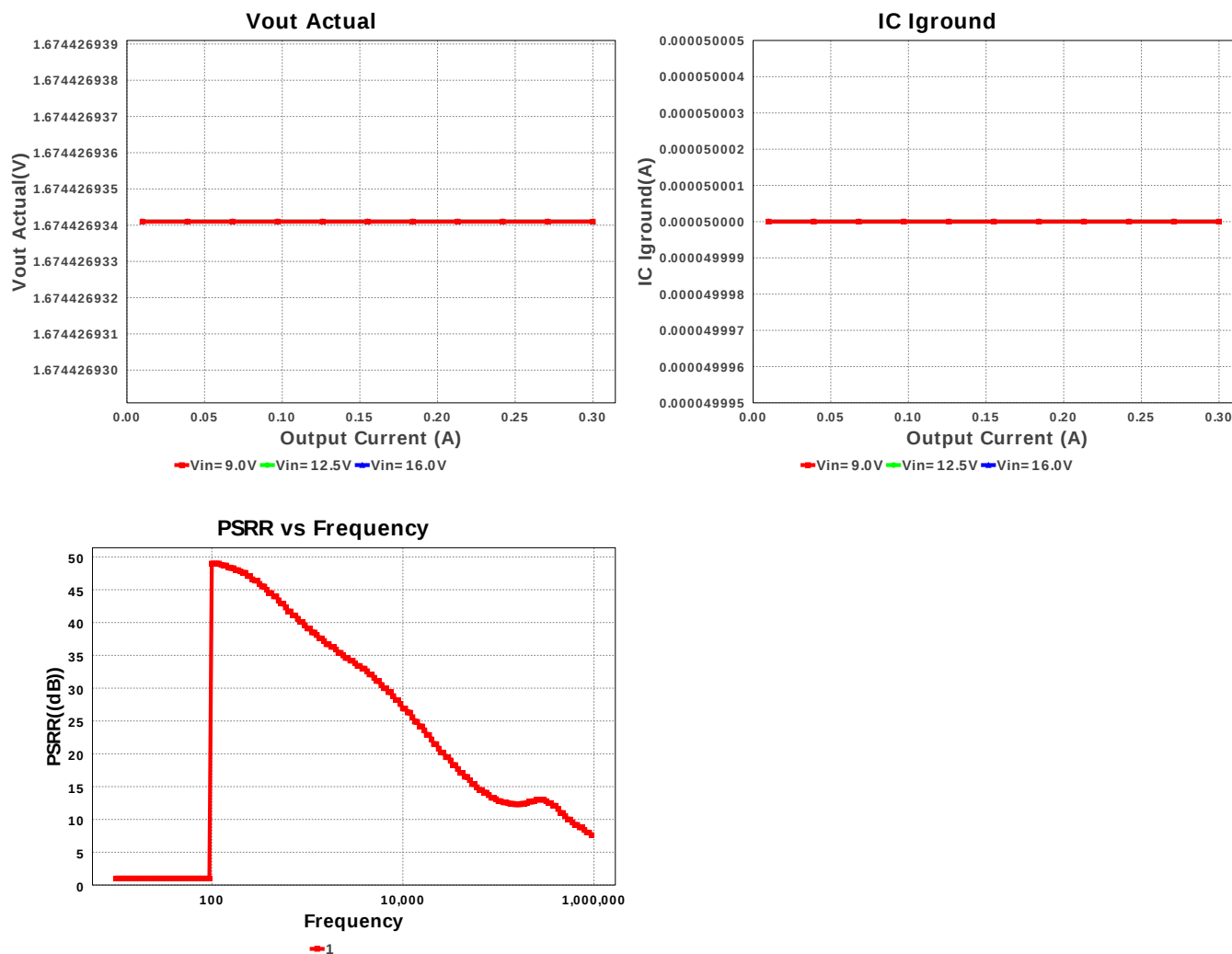
Design : 4740117/2 LM317KCS
 Design 2 from yulzhu@gmail.com



Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	HeatSink	Aavid	576602B00000G	Heatsink	1	\$0.63	 576602 403 mm ²
2.	Rfbb	Vishay-Dale	CRCW0402698RFKED Series= CRCW..e3	Res= 698.0 Ohm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
3.	Rfbb	Vishay-Dale	CRCW0402237RFKED Series= CRCW..e3	Res= 237.0 Ohm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
4.	U1	Texas Instruments	LM317KCS	Switcher	1	\$0.24	 TO-220-3 127 mm ²





Operating Values

#	Name	Value	Category	Description
1.	IC Igroud	50.0 μ A	Current	IC ground current
2.	Iin Avg	300.05 mA	Current	Average input current
3.	BOM Count	4	General	Total Design BOM count
4.	FootPrint	536.0 mm ²	General	Total Foot Print Area of BOM components
5.	IC Tolerance	50.0 mV	General	IC Feedback Tolerance
6.	Output Noise RMS	150.0 μ V	General	Noise RMS
7.	Pout	1.5 W	General	Total output power
8.	Total BOM	\$0.89	General	Total BOM Cost
9.	Vin p-p	160.0 mV	Op_Point	Input Source ripple voltage
10.	Vout Actual	1.674 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
11.	Vout OP	5.0 V	Op_Point	Operational Output Voltage
12.	Efficiency	30.705 %	Op_point	Steady state efficiency
13.	IC Tj	110.54 degC	Op_point	IC junction temperature
14.	ICThetaJA	24.4 degC/W	Op_point	IC junction-to-ambient thermal resistance
15.	IOUT_OP	300.0 mA	Op_point	Iout operating point
16.	Input Ripple Frequency	100.0 kHz	Op_point	Input Source Ripple Frequency for PSRR Calculation
17.	PSRR est.	-12.8 dB	Op_point	Power Supply Rejection Ratio estimated
18.	VIN_OP	16.0 V	Op_point	Vin operating point
19.	Vout p-p	36.654 mV	Op_point	Peak-to-peak output ripple voltage
20.	IC Pd	3.301 W	Power	IC power dissipation
21.	Total Pd	3.301 W	Power	Total Power Dissipation
22.	Vout Tolerance	4.533 %		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	300.0 m	Maximum Output Current
2.	VinMax	16.0	Maximum input voltage
3.	VinMin	9.0	Minimum input voltage
4.	Vout	5.0	Output Voltage

#	Name	Value	Description
5.	base_pn	LM317	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

- 1.
2. **LM317** Product Folder : <http://www.ti.com/product/lm317> : contains the data sheet and other resources.

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