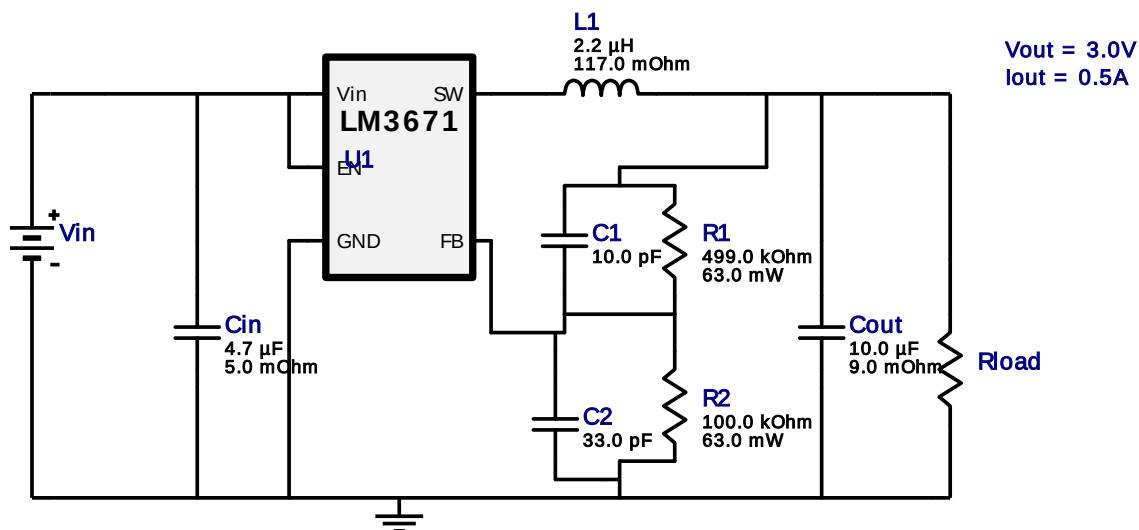


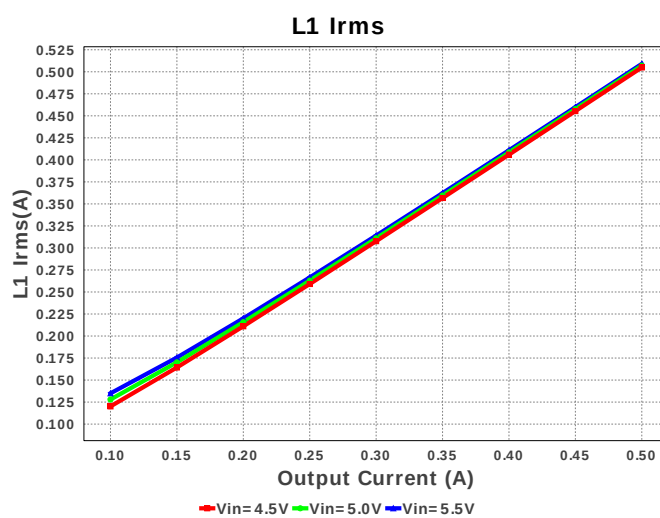
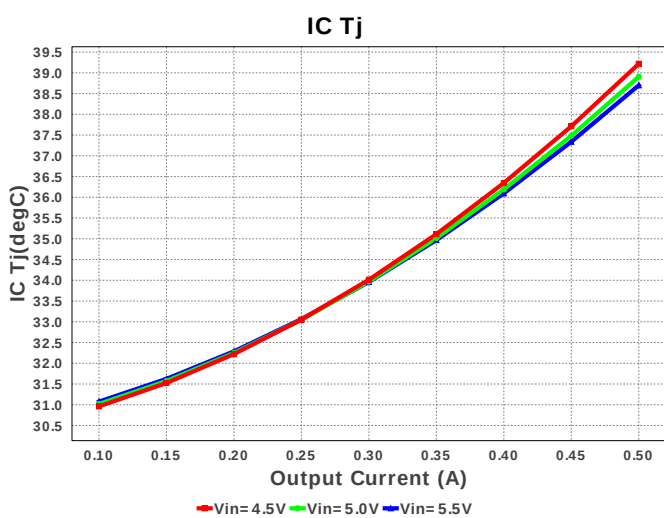
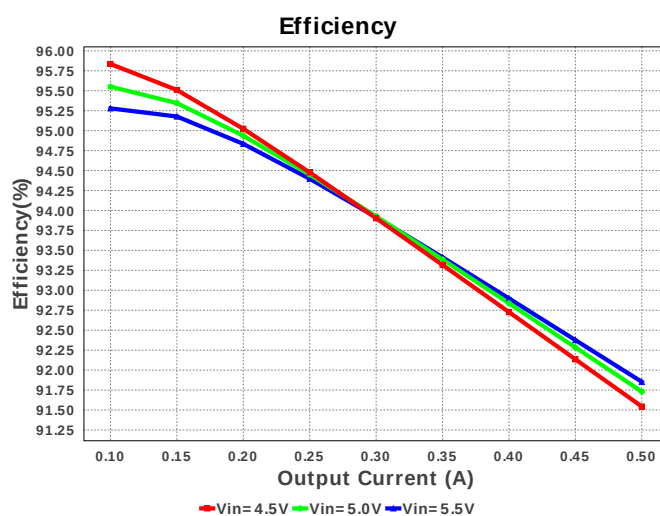
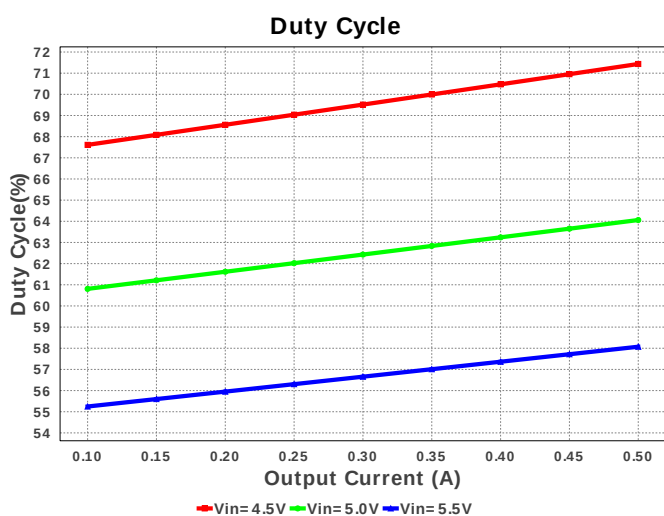
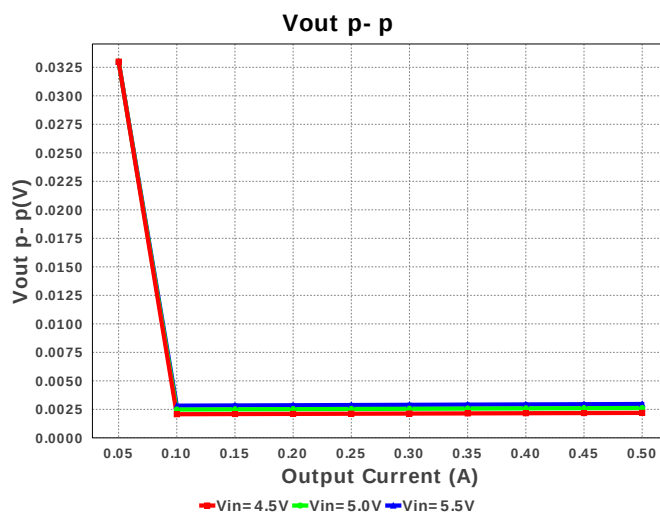
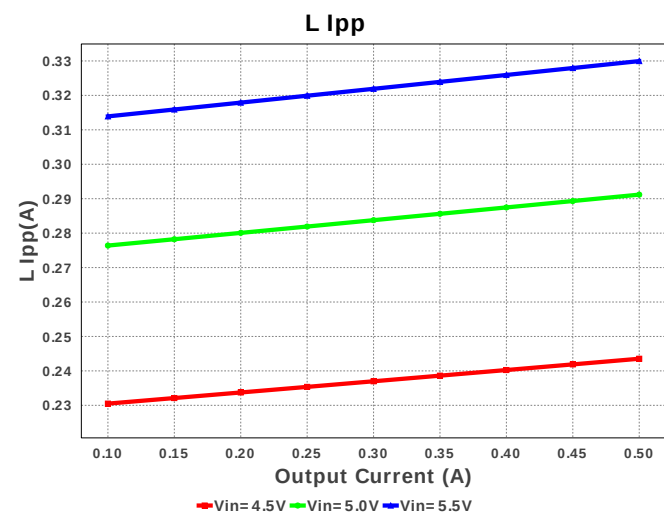
WEBENCH® Design Report

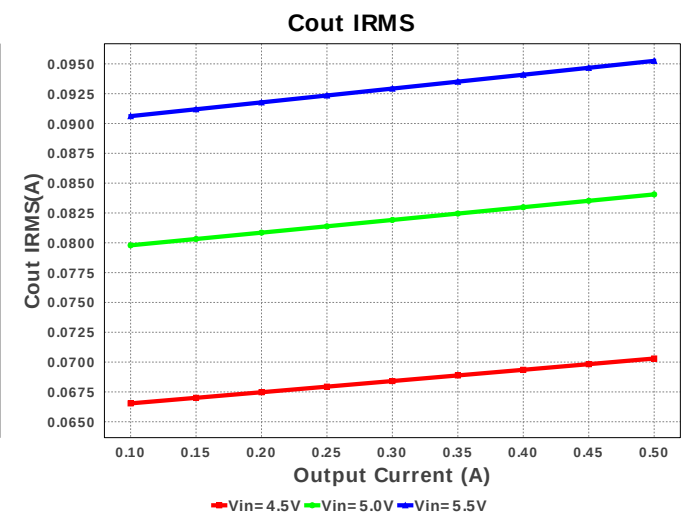
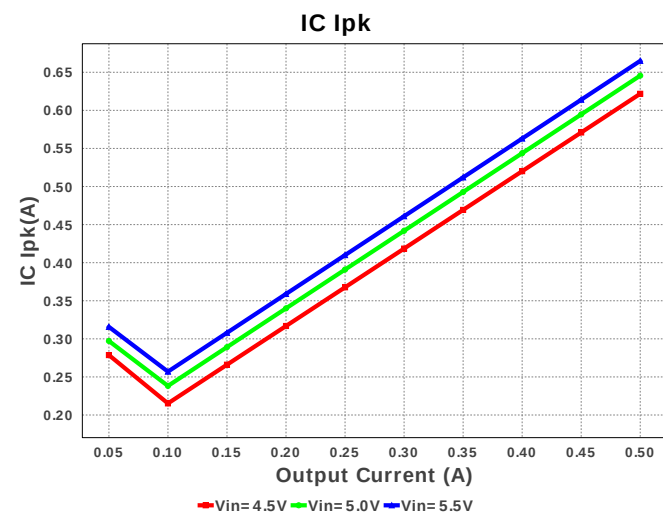
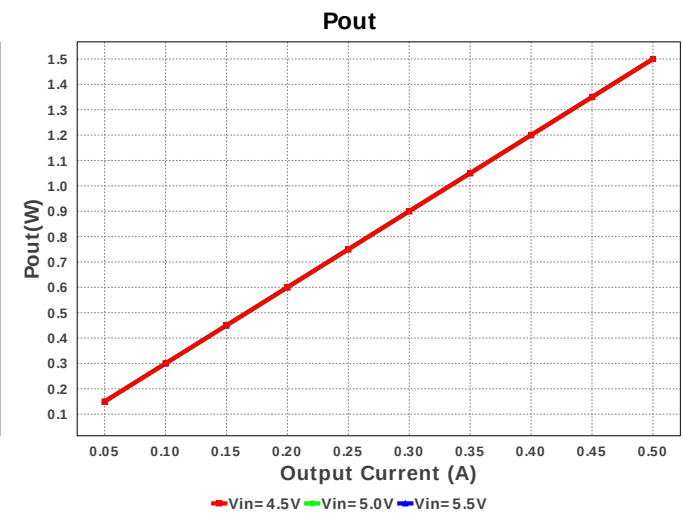
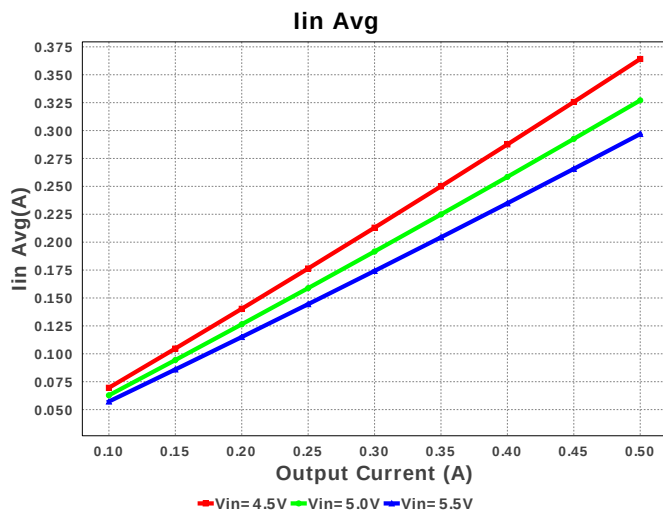
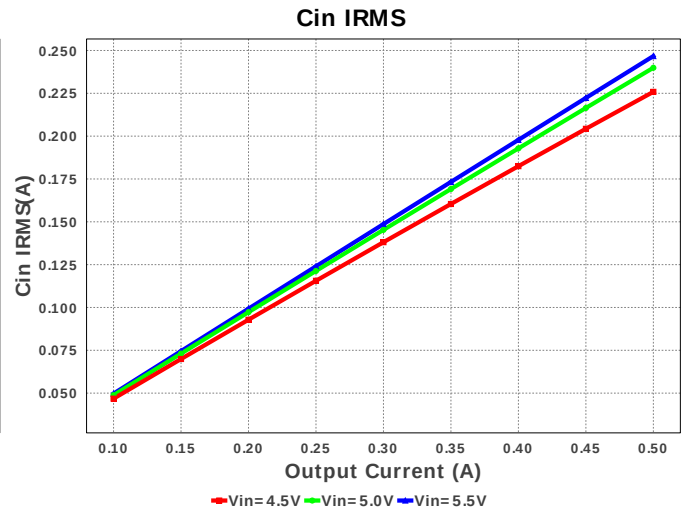
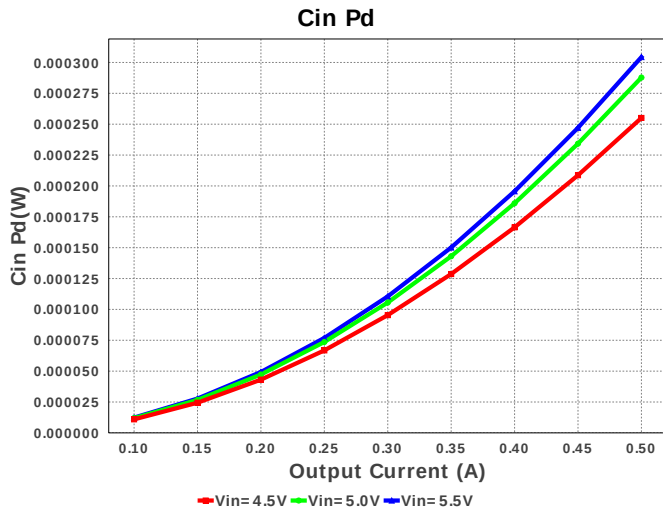
Design : 4742013/125 LM3671TLX-ADJ/NOPB
LM3671TLX-ADJ/NOPB 4.5V-5.5V to 3.00V @ 0.5A

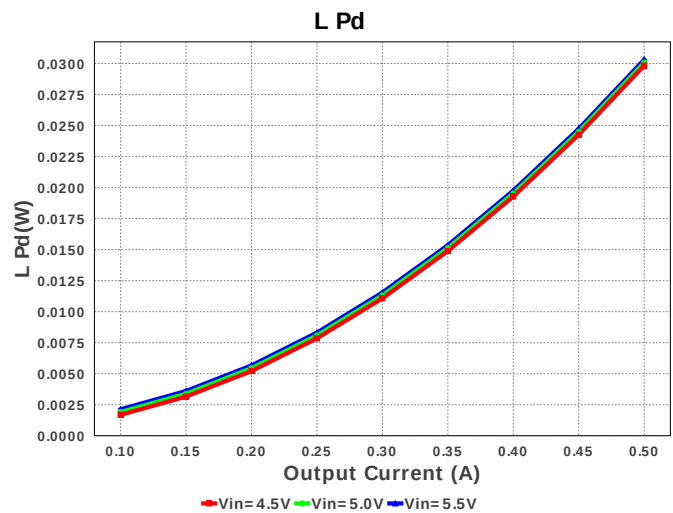
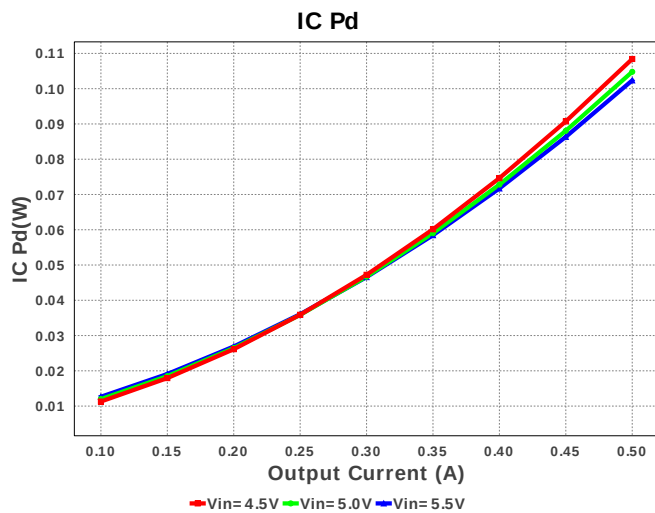
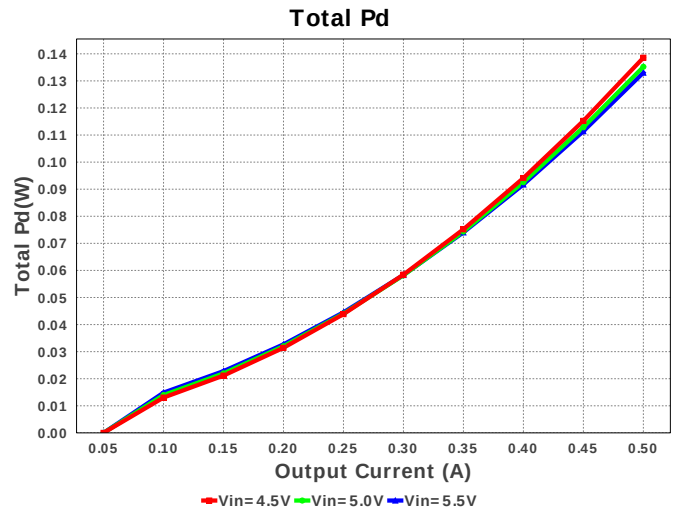
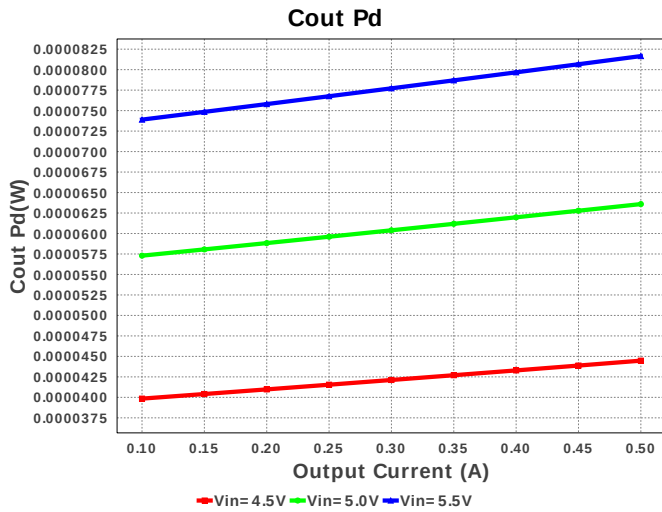


Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	C1	Kemet	C0805C100M4GACTU Series= C0G/NP0	Cap= 10.0 pF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0805 7 mm ²
2.	C2	MuRata	GJM0335C0J330JB01D Series= C0G/NP0	Cap= 33.0 pF VDC= 6.3 V IRMS= 0.0 A	1	\$0.01	0201 2 mm ²
3.	Cin	MuRata	GRM188R60J475KE19D Series= X5R	Cap= 4.7 uF ESR= 5.0 mOhm VDC= 6.3 V IRMS= 2.0 A	1	\$0.01	0603 5 mm ²
4.	Cout	MuRata	GRM188R60J106ME47D Series= X5R	Cap= 10.0 uF ESR= 9.0 mOhm VDC= 6.3 V IRMS= 2.74 A	1	\$0.02	0603 5 mm ²
5.	L1	TDK	MLP2520S2R2MT0S1	L= 2.2 uH DCR= 117.0 mOhm	1	\$0.14	MLP2520S-M 12 mm ²
6.	R1	Vishay-Dale	CRCW0402499KFKED Series= CRCW..e3	Res= 499.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²
7.	R2	Vishay-Dale	CRCW0402100KFKED Series= CRCW..e3	Res= 100.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²
8.	U1	Texas Instruments	LM3671TLX-ADJ/NOPB	Switcher	1	\$0.30	TLA05CBA 5 mm ²







Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	246.72 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	95.25 mA	Current	Output capacitor RMS ripple current
3.	IC IpK	664.978 mA	Current	Peak switch current in IC
4.	Iin Avg	296.92 mA	Current	Average input current
5.	L Ipp	329.96 mA	Current	Peak-to-peak inductor ripple current
6.	L1 Irms	508.992 mA	Current	Inductor ripple current
7.	BOM Count	8	General	Total Design BOM count
8.	FootPrint	41.0 mm ²	General	Total Foot Print Area of BOM components
9.	Frequency	2.0 MHz	General	Switching frequency
10.	IC Tolerance	0.0 V	General	IC Feedback Tolerance
11.	Pout	1.5 W	General	Total output power
12.	Total BOM	\$0.51	General	Total BOM Cost
13.	Duty Cycle	58.072 %	Op_point	Duty cycle
14.	Efficiency	91.853 %	Op_point	Steady state efficiency
15.	IC Tj	38.7 degC	Op_point	IC junction temperature
16.	ICThetaJA	85.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
17.	IOUT_OP	500.0 mA	Op_point	Iout operating point
18.	VIN_OP	5.5 V	Op_point	Vin operating point
19.	Vout p-p	2.97 mV	Op_point	Peak-to-peak output ripple voltage
20.	Cin Pd	304.355 μ W	Power	Input capacitor power dissipation
21.	Cout Pd	81.653 μ W	Power	Output capacitor power dissipation
22.	IC Pd	102.347 mW	Power	IC power dissipation
23.	L Pd	30.311 mW	Power	Inductor power dissipation
24.	Total Pd	133.045 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	500.0 m	Maximum Output Current
2.	VinMax	5.5	Maximum input voltage
3.	VinMin	4.5	Minimum input voltage

#	Name	Value	Description
4.	Vout	3.0	Output Voltage
5.	base_pn	LM3671	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

1. **LM3671** Product Folder : <http://www.ti.com/product/LM3671> : contains the data sheet and other resources.

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