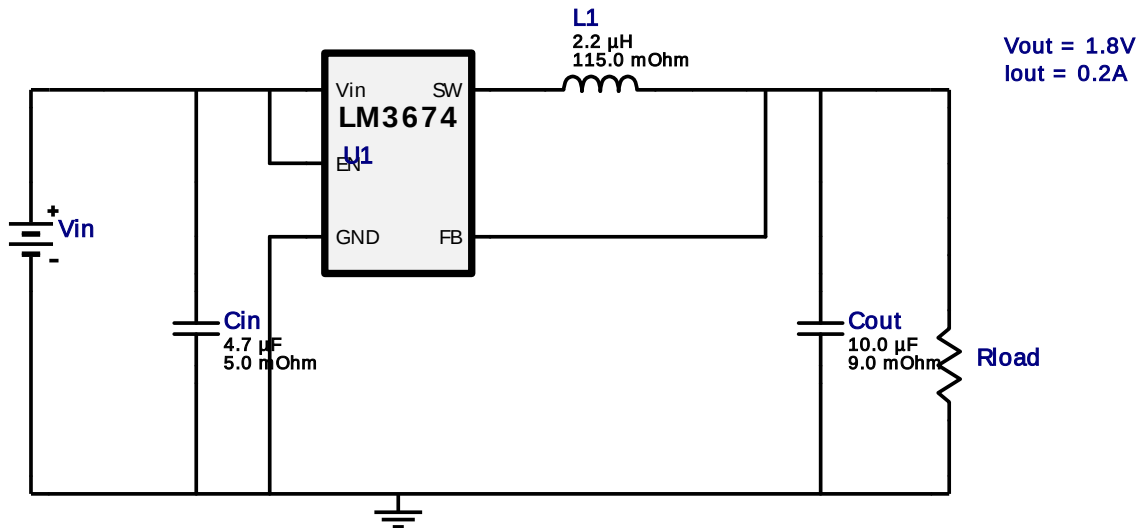


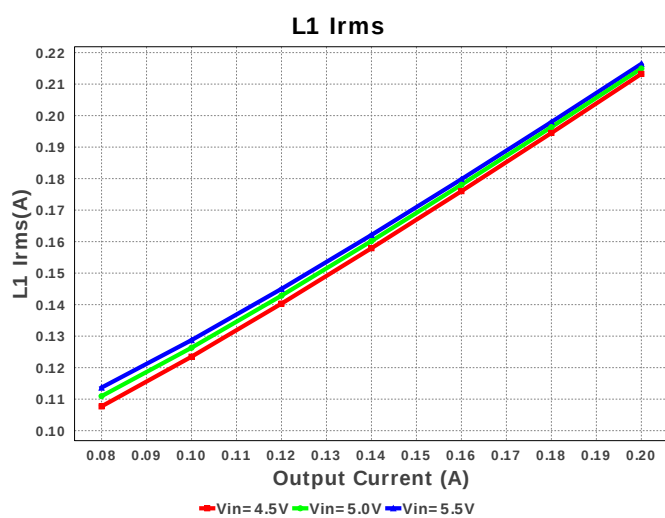
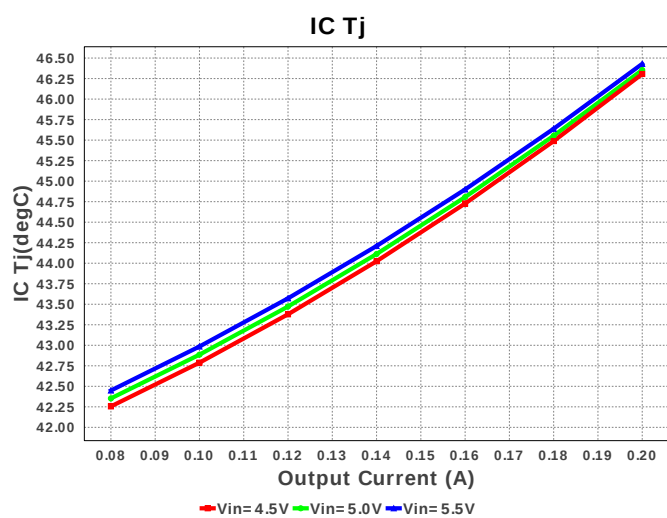
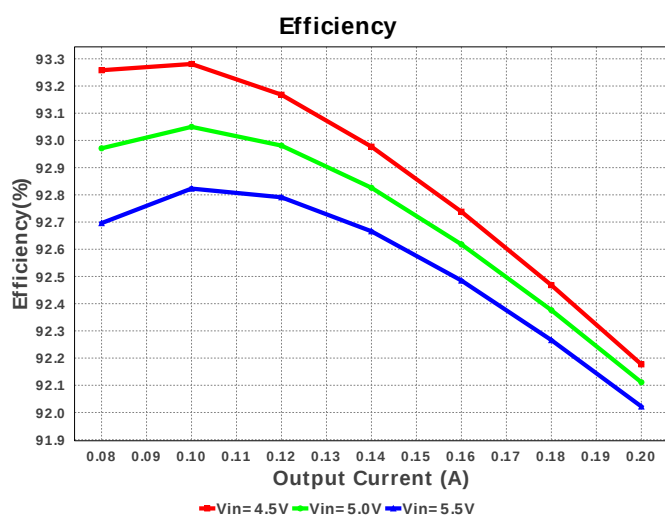
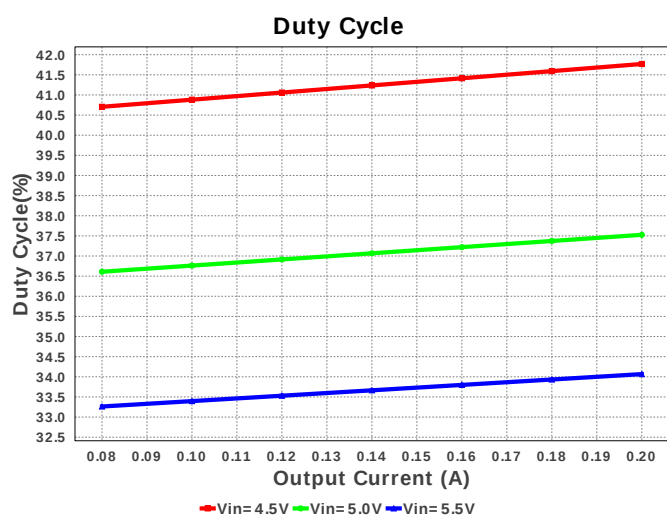
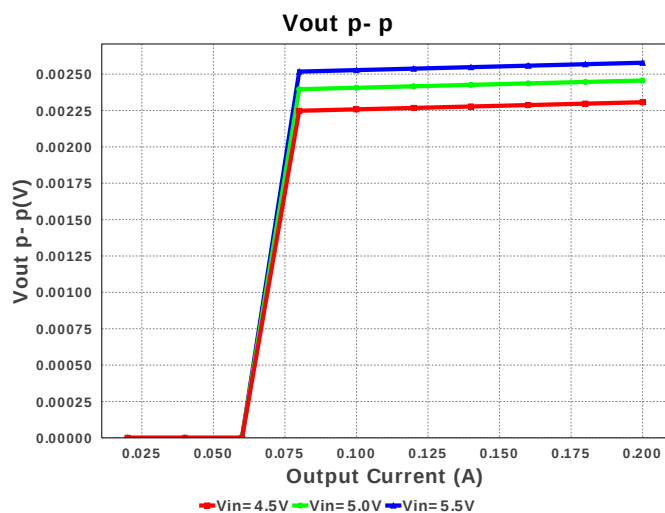
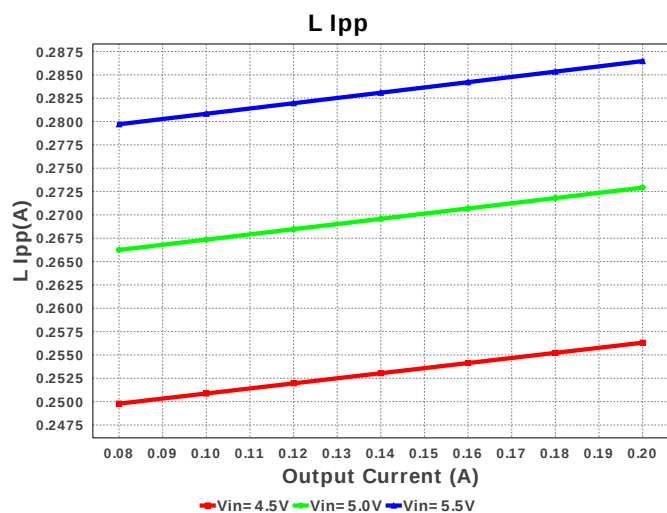
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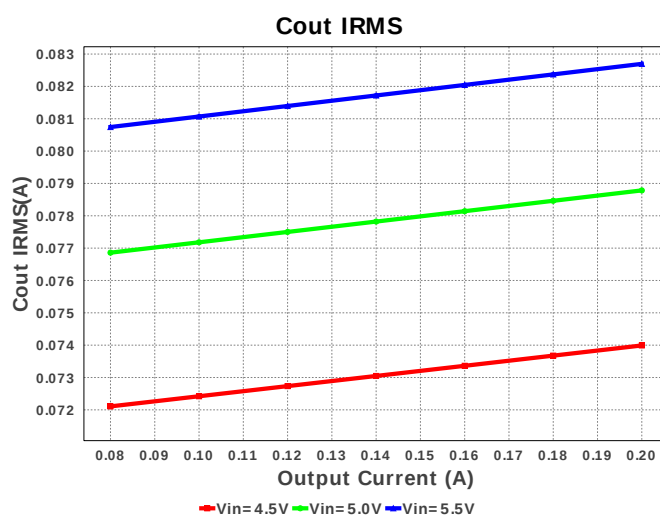
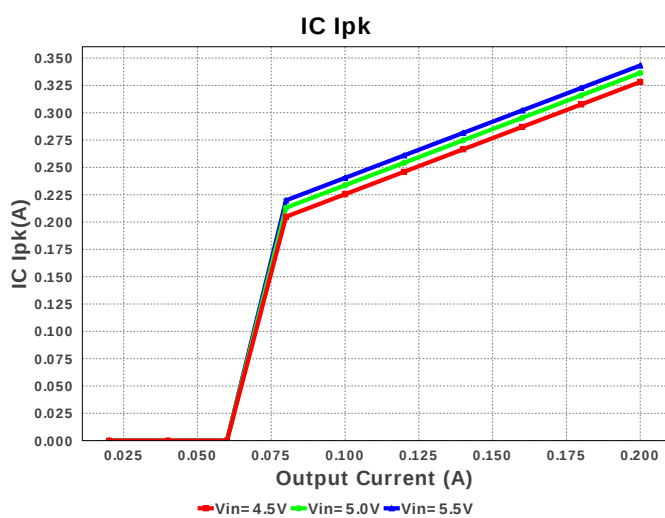
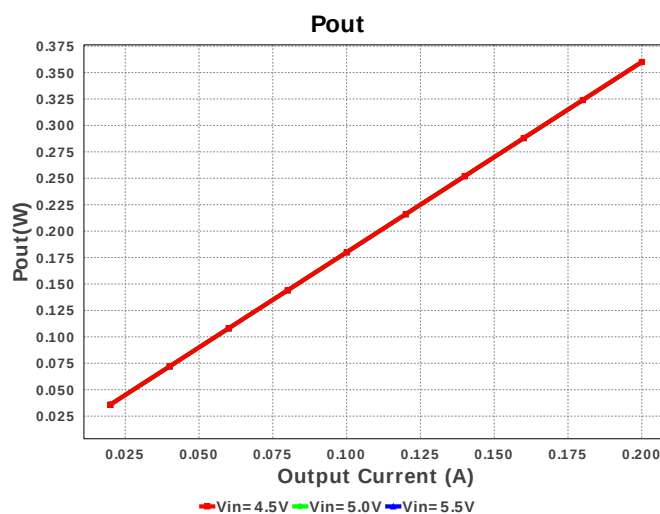
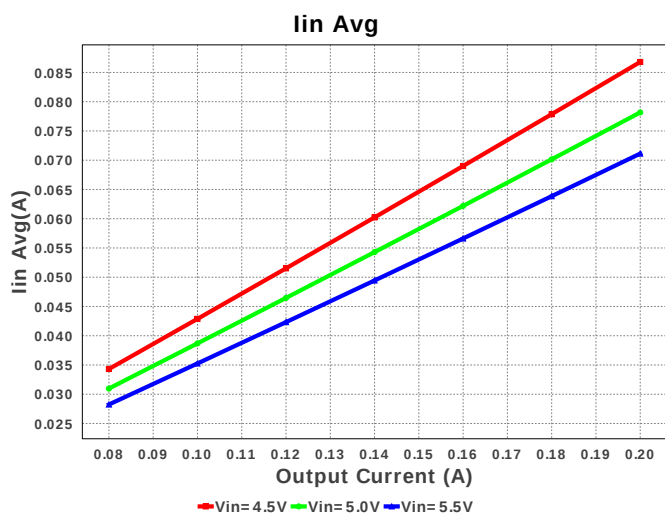
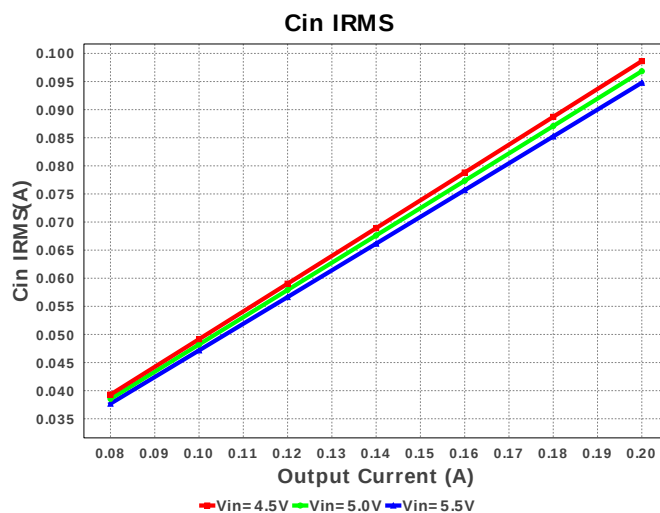
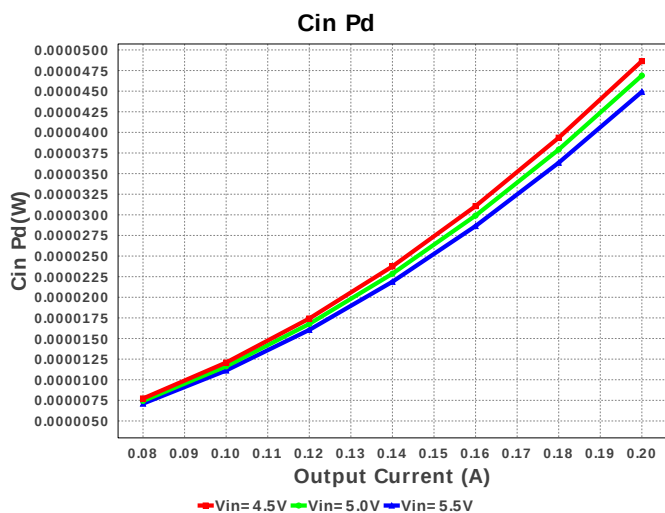
Design : 3496425/106 LM3674MFX-1.8/NOPB
LM3674MFX-1.8/NOPB 4.5V-5.5V to 1.80V @ 0.2A

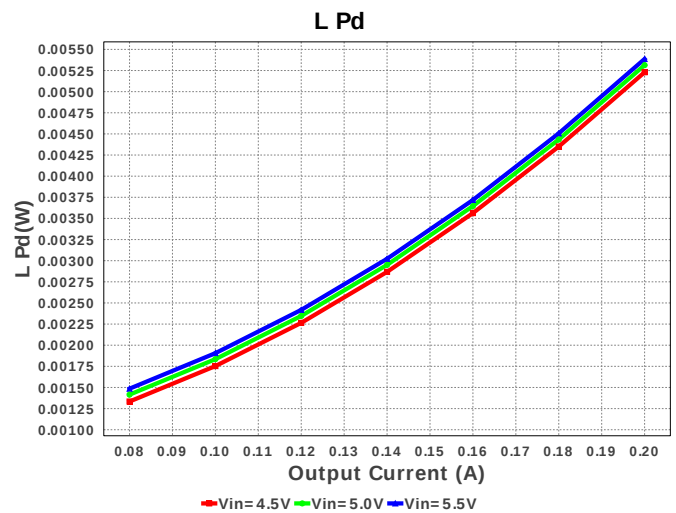
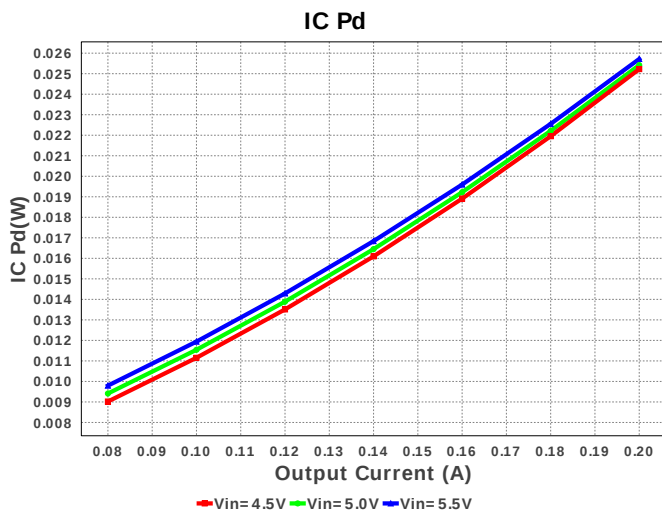
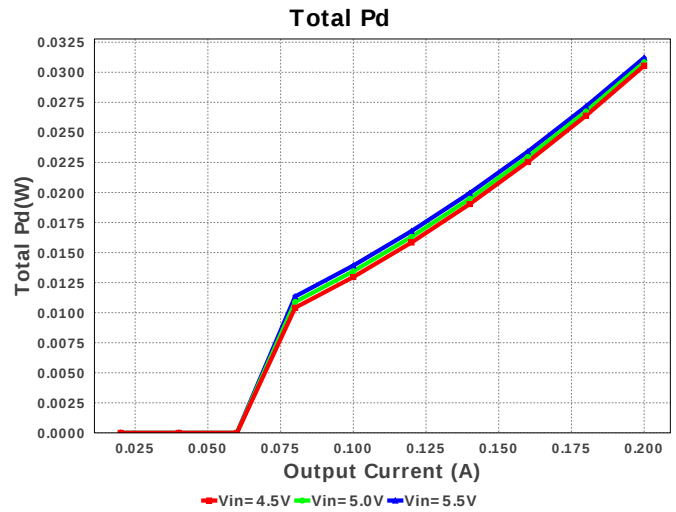
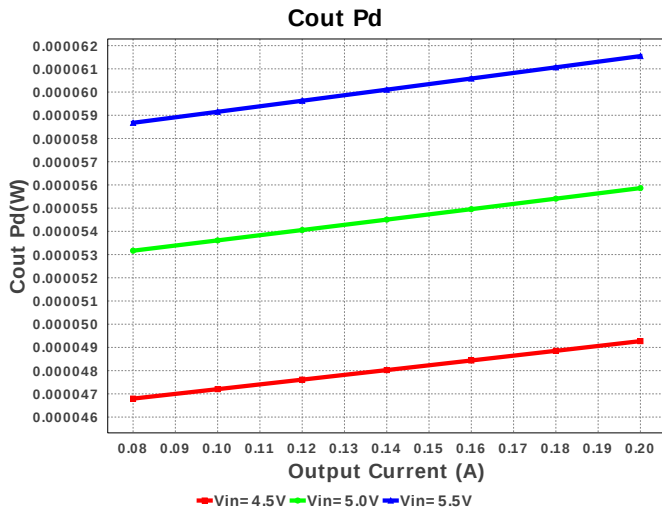


Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	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
2.	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
3.	L1	TDK	NLCV32T-2R2M-PFR	L= 2.2 uH DCR= 115.0 mOhm	1	\$0.10	NLCV32 13 mm ²
4.	U1	Texas Instruments	LM3674MFX-1.8/NOPB	Switcher	1	\$0.32	MF05A 15 mm ²







Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	94.787 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	82.697 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	343.235 mA	Current	Peak switch current in IC
4.	Iin Avg	71.129 mA	Current	Average input current
5.	L Ipp	286.47 mA	Current	Peak-to-peak inductor ripple current
6.	L1 Irms	216.423 mA	Current	Inductor ripple current
7.	BOM Count	4	General	Total Design BOM count
8.	FootPrint	38.0 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.	Mode	CCM	General	Conduction Mode
12.	Pout	360.0 mW	General	Total output power
13.	Total BOM	\$0.45	General	Total BOM Cost
14.	Duty Cycle	34.067 %	Op_point	Duty cycle
15.	Efficiency	92.022 %	Op_point	Steady state efficiency
16.	IC Tj	46.429 degC	Op_point	IC junction temperature
17.	ICThetaJA	250.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
18.	IOUT_OP	200.0 mA	Op_point	Iout operating point
19.	VIN_OP	5.5 V	Op_point	Vin operating point
20.	Vout p-p	2.578 mV	Op_point	Peak-to-peak output ripple voltage
21.	Cin Pd	44.923 μW	Power	Input capacitor power dissipation
22.	Cout Pd	61.549 μW	Power	Output capacitor power dissipation
23.	IC Pd	25.717 mW	Power	IC power dissipation
24.	L Pd	5.386 mW	Power	Inductor power dissipation
25.	Total Pd	31.211 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	200.0 m	Maximum Output Current
2.	VinMax	5.5	Maximum input voltage

#	Name	Value	Description
3.	VinMin	4.5	Minimum input voltage
4.	Vout	1.8	Output Voltage
5.	base_pn	LM3674	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	40.0	Ambient temperature

Design Assistance

1. **LM3674** Product Folder : <http://www.ti.com/product/LM3674> : contains the data sheet and other resources.

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