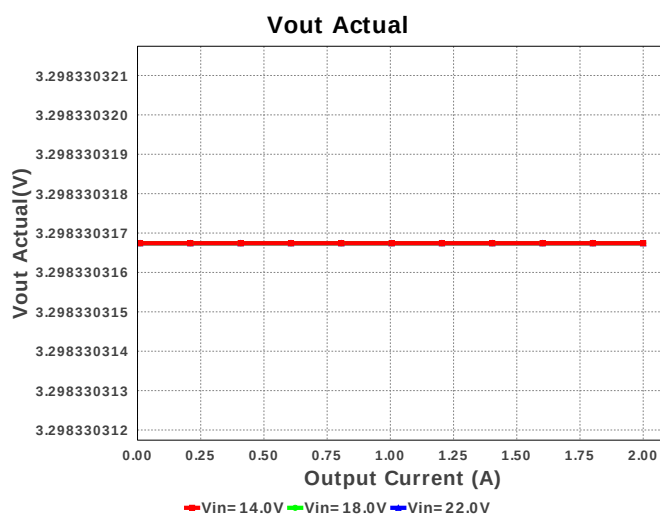
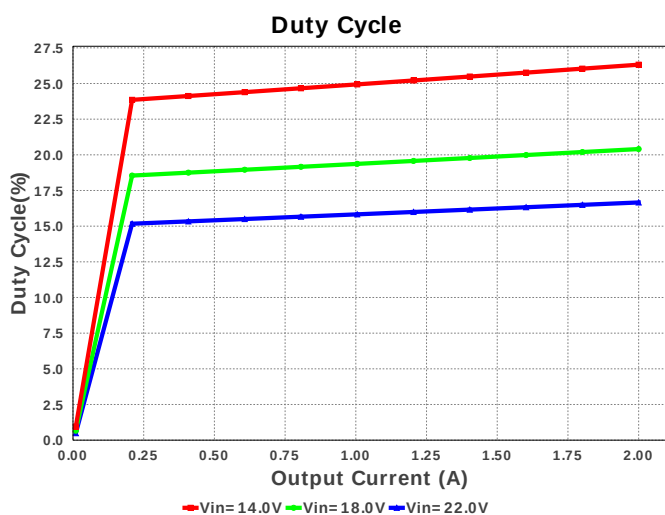
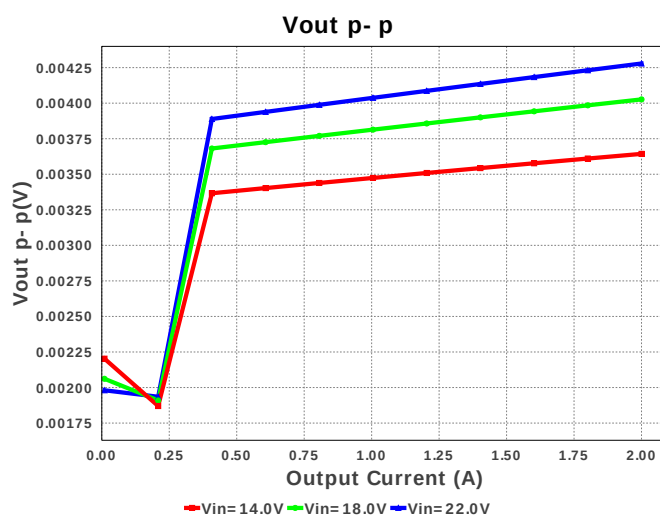
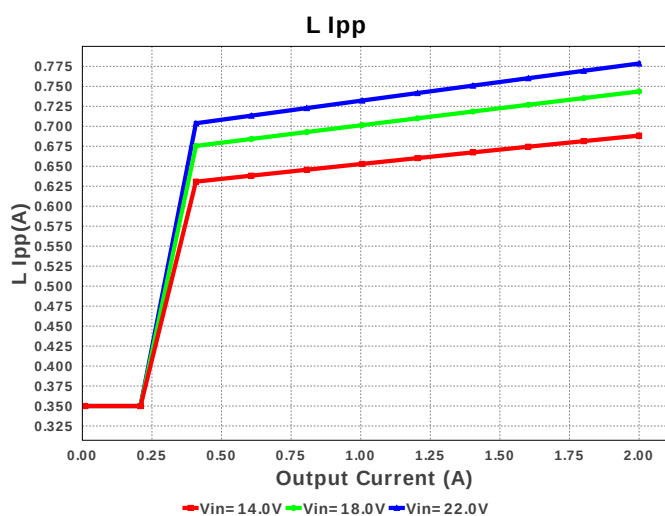
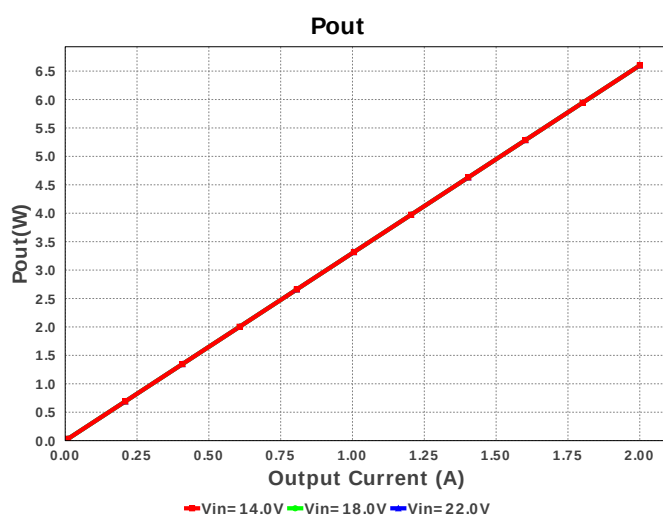
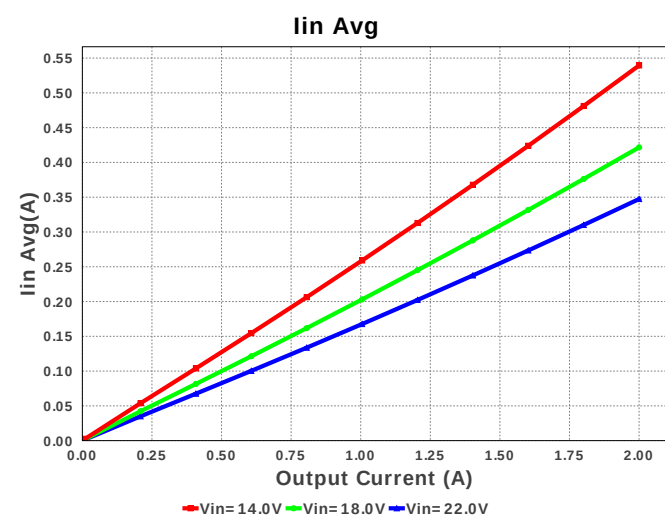
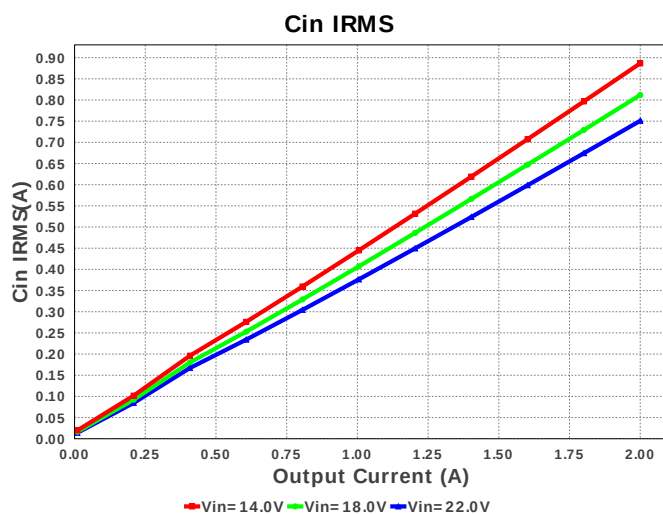
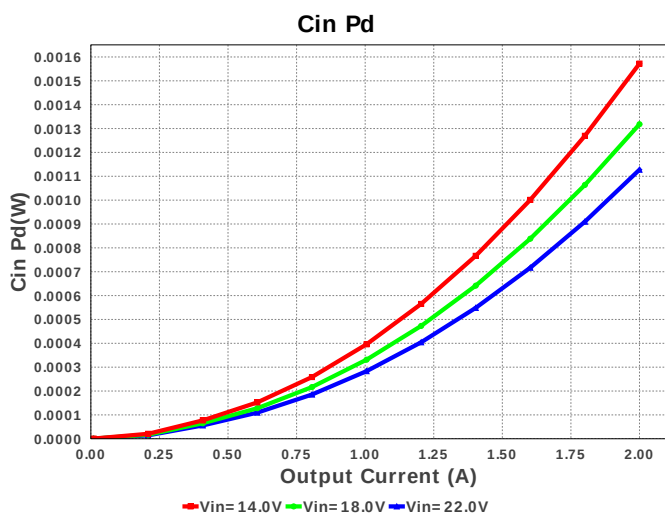
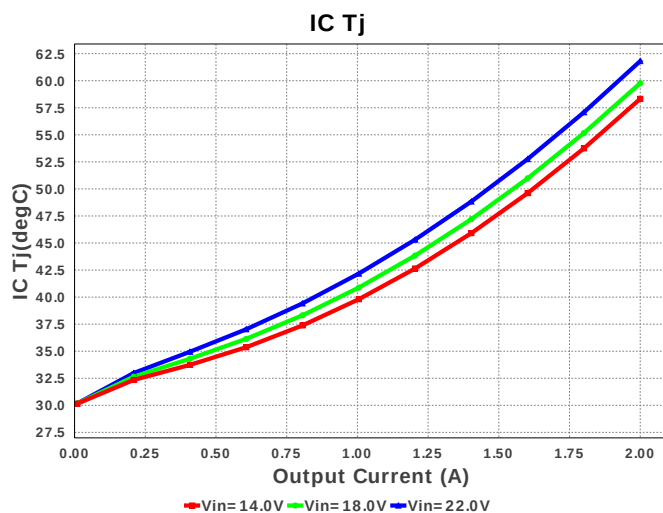
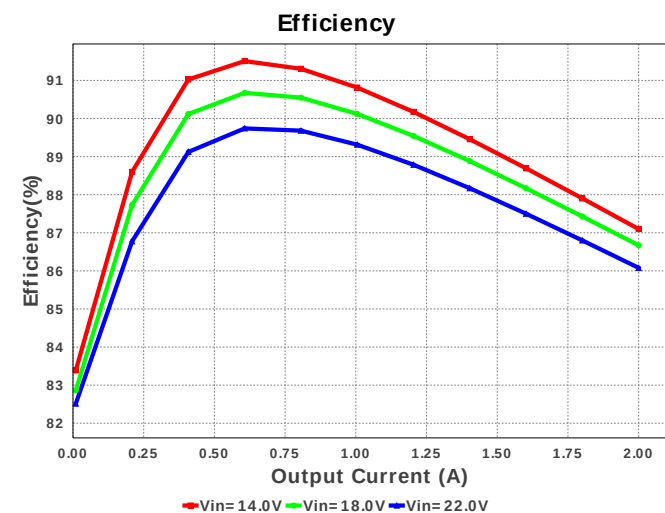
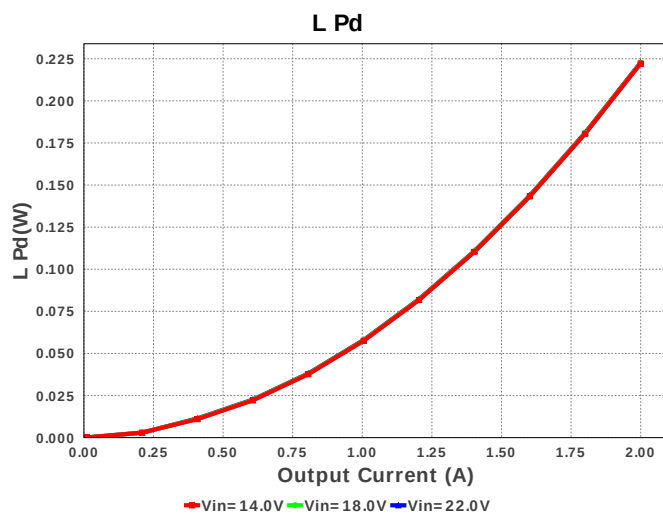
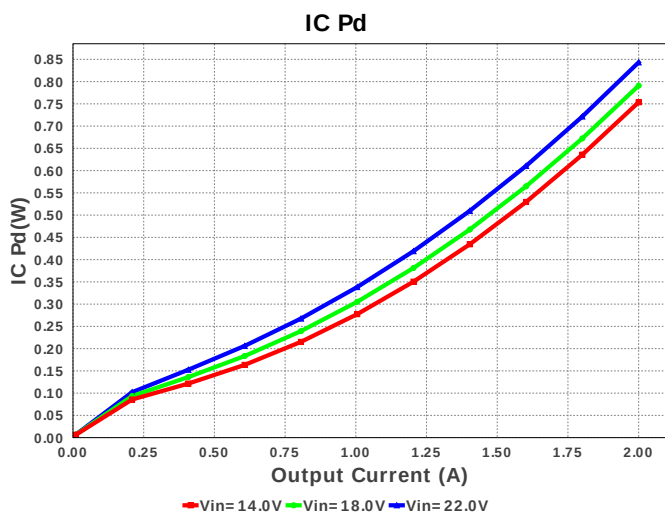
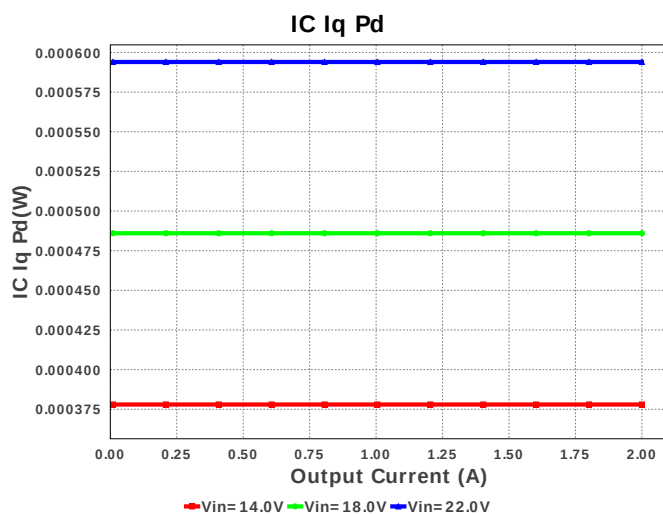
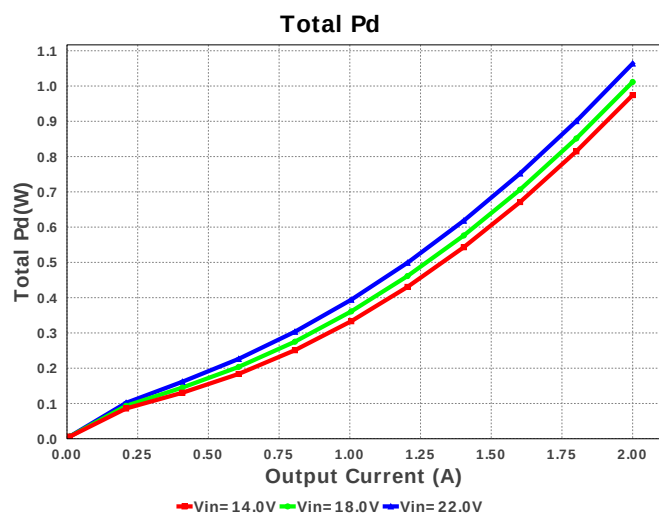
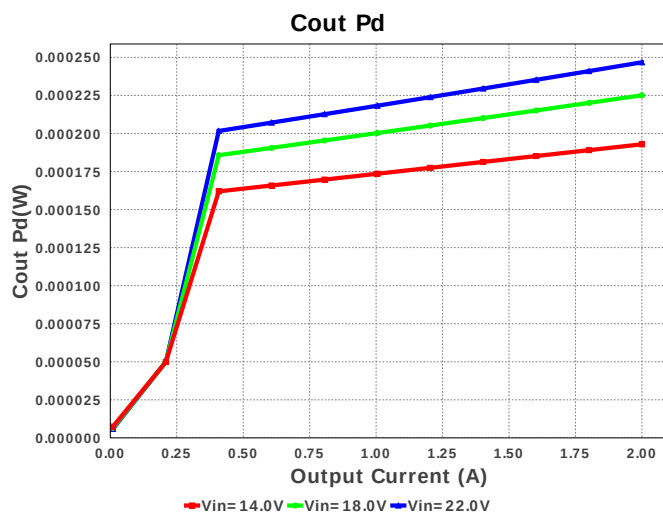
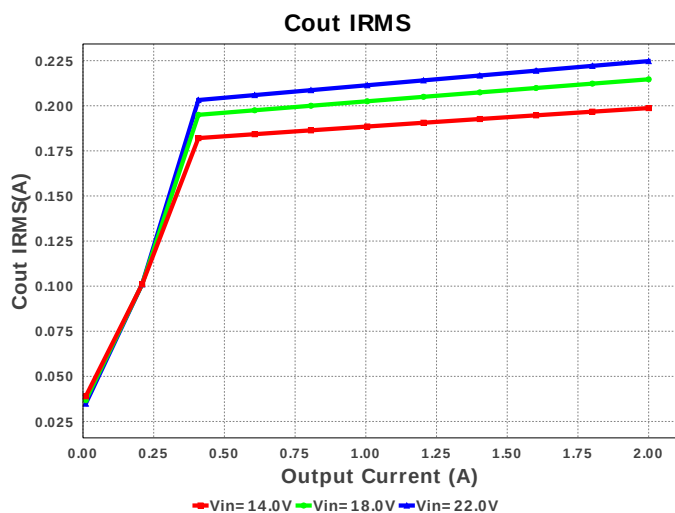


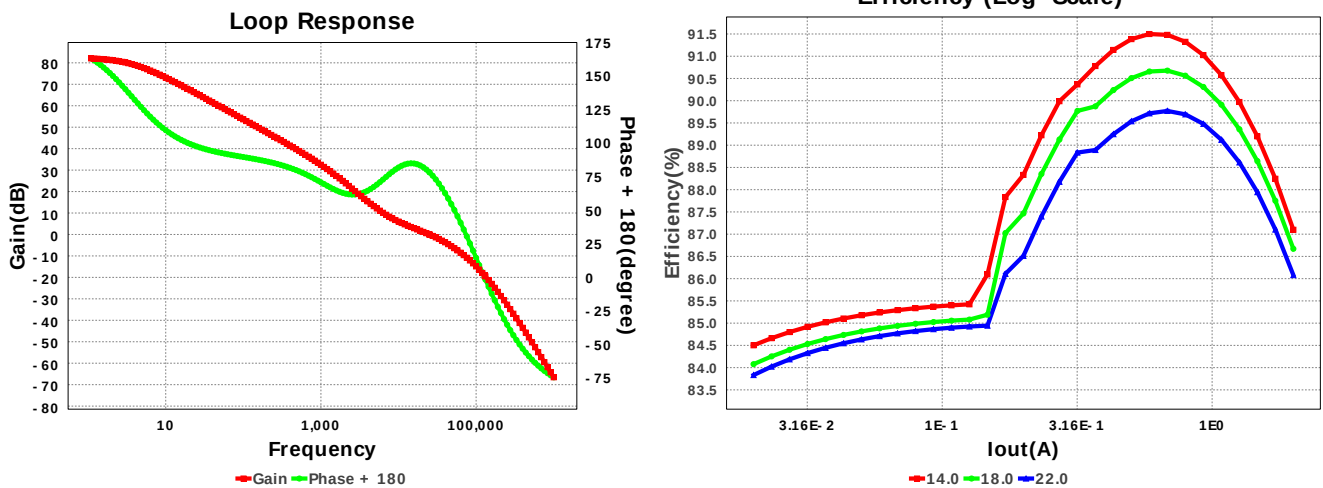
Device = LM46002PWPR
Topology = Buck
Created = 7/12/16 1:19:11 AM
BOM Cost = \$2.43
BOM Count = 11
Total Pd = 1.06W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
10.	Rfbt	Vishay-Dale	CRCW04021M00FKED Series= CRCW..e3	Res= 1000.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²
11.	U1	Texas Instruments	LM46002PWPR	Switcher	1	\$1.85	PWP0016F 59 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	750.889 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	224.752 mA	Current	Output capacitor RMS ripple current
3.	Iin Avg	347.36 mA	Current	Average input current
4.	L Ipp	778.56 mA	Current	Peak-to-peak inductor ripple current
5.	BOM Count	11	General	Total Design BOM count
6.	FootPrint	178.0 mm ²	General	Total Foot Print Area of BOM components
7.	Frequency	500.0 kHz	General	Switching frequency
8.	Pout	6.6 W	General	Total output power
9.	Total BOM	\$2.43	General	Total BOM Cost
10.	Low Freq Gain	82.047 dB	Op_Point	Gain at 10Hz
11.	Vout Actual	3.298 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
12.	Vout OP	3.3 V	Op_Point	Operational Output Voltage
13.	Cross Freq	24.996 kHz	Op_point	Bode plot crossover frequency
14.	Duty Cycle	16.662 %	Op_point	Duty cycle
15.	Efficiency	86.079 %	Op_point	Steady state efficiency
16.	Gain Marg	-19.12 dB	Op_point	Bode Plot Gain Margin
17.	IC Tj	61.813 degC	Op_point	IC junction temperature
18.	ICThetaJA	38.9 degC/W	Op_point	IC junction-to-ambient thermal resistance
19.	IOUT_OP	2.0 A	Op_point	Iout operating point
20.	Phase Marg	78.511 deg	Op_point	Bode Plot Phase Margin
21.	VIN_OP	22.0 V	Op_point	Vin operating point
22.	Vout p-p	4.279 mV	Op_point	Peak-to-peak output ripple voltage
23.	Cin Pd	1.128 mW	Power	Input capacitor power dissipation
24.	Cout Pd	246.759 μW	Power	Output capacitor power dissipation
25.	IC Iq Pd	594.0 μW	Power	IC Iq Pd
26.	IC Pd	843.216 mW	Power	IC power dissipation
27.	L Pd	222.778 mW	Power	Inductor power dissipation
28.	Total Pd	1.064 W	Power	Total Power Dissipation
29.	Vout Tolerance	2.404 %		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	2.0	Maximum Output Current
2.	VinMax	22.0	Maximum input voltage
3.	VinMin	14.0	Minimum input voltage
4.	Vout	3.3	Output Voltage
5.	base_pn	LM46002	Texas Instruments Base Part Number
6.	source	DC	Input Source Type
7.	ta	30.0	Ambient temperature

Design Assistance

1. LM46002 Product Folder : <http://www.ti.com/product/LM46002> : contains the data sheet and other resources.

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