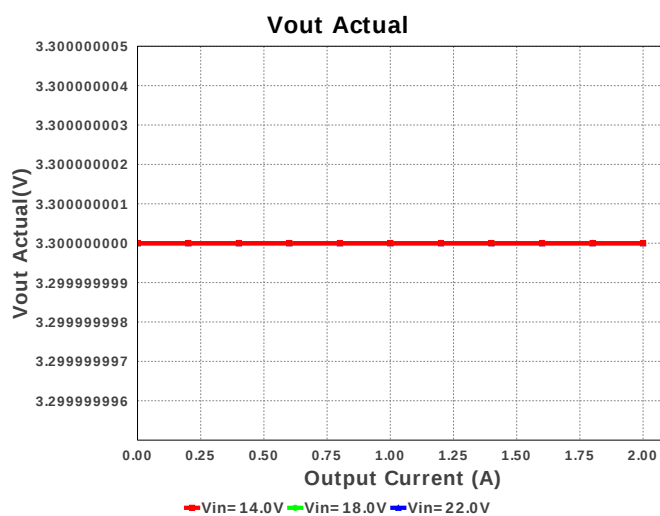
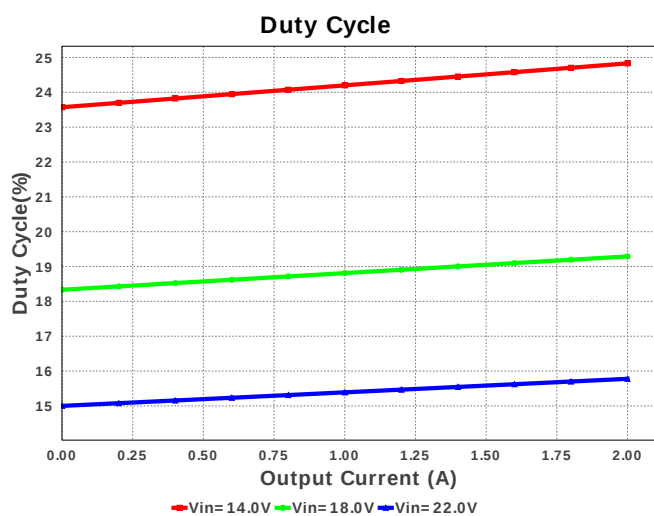
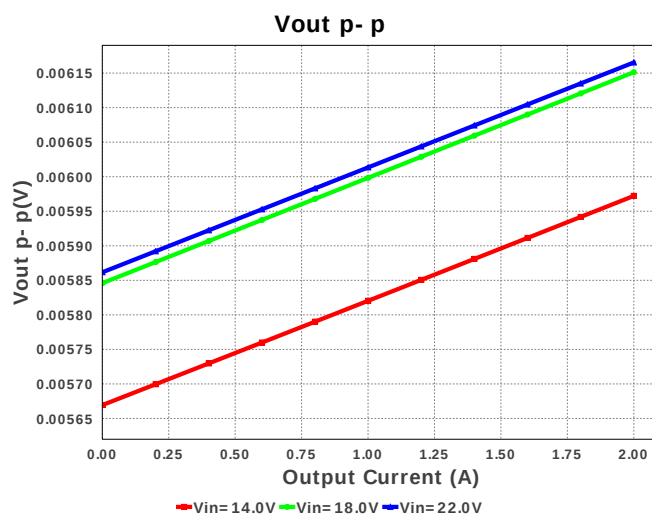
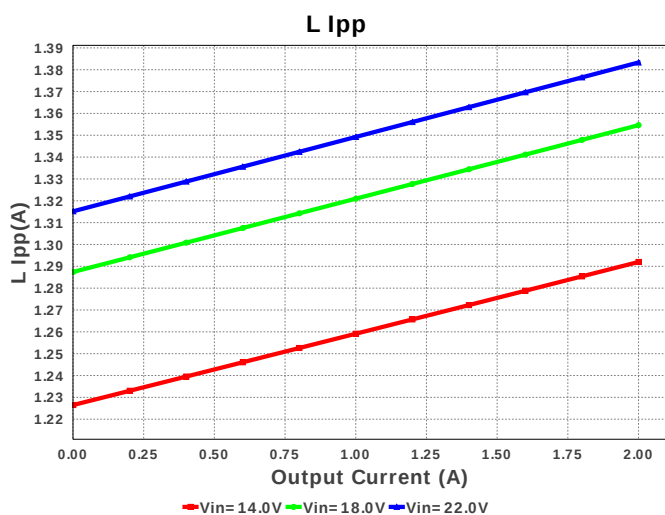
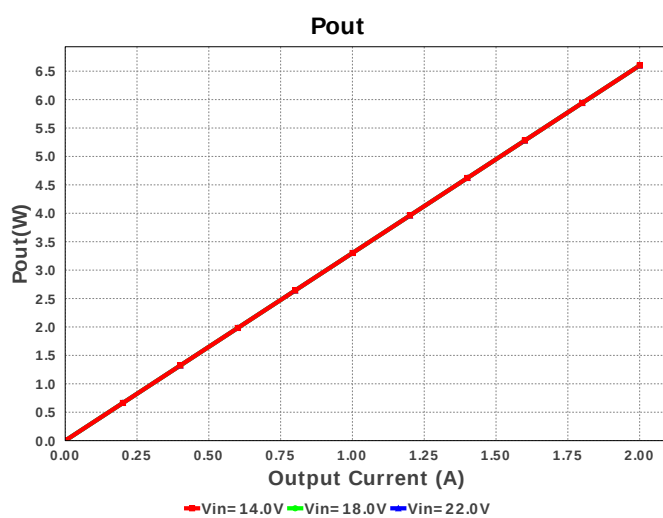
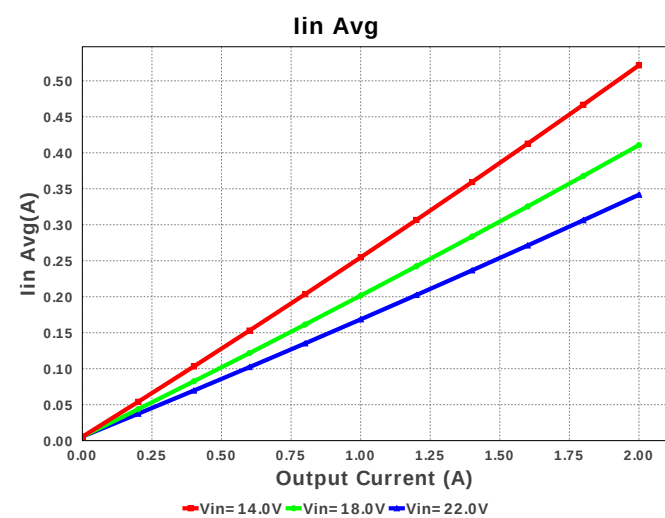
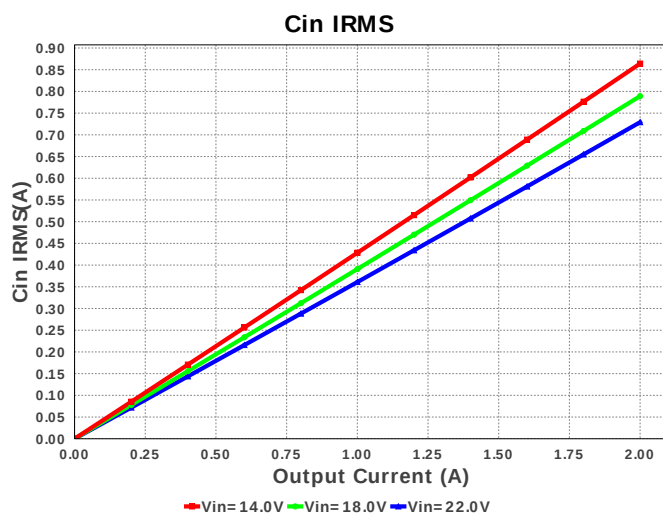
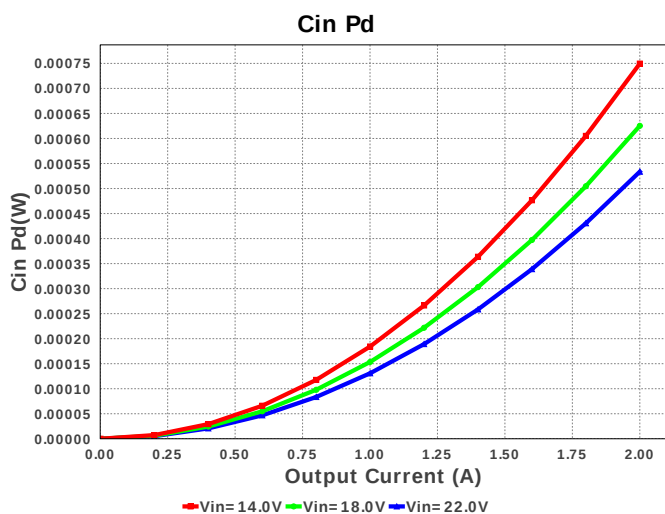
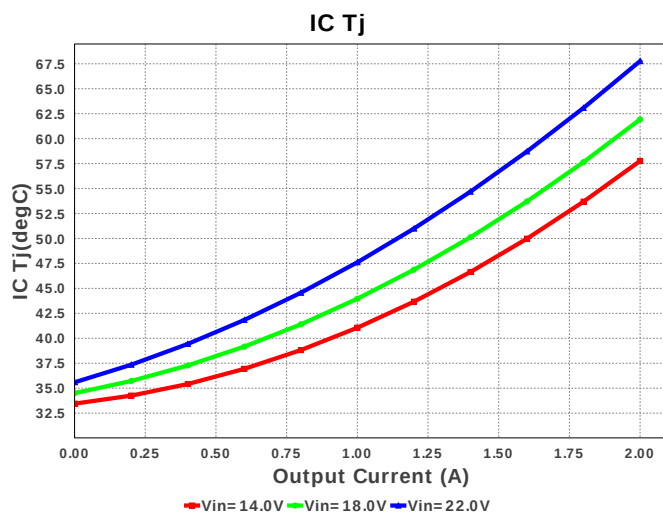
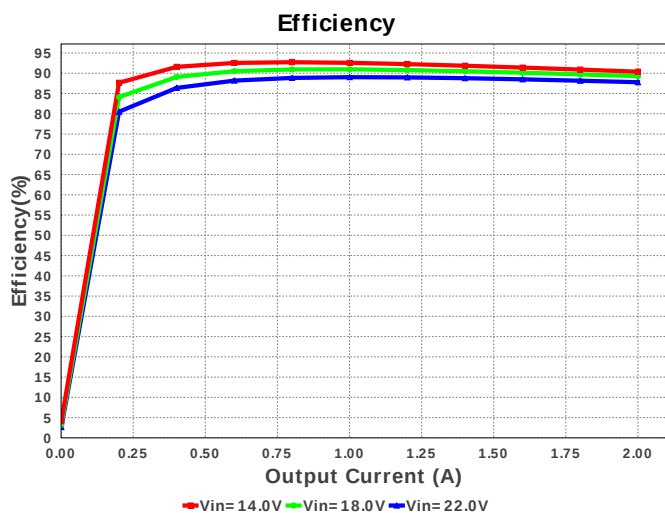


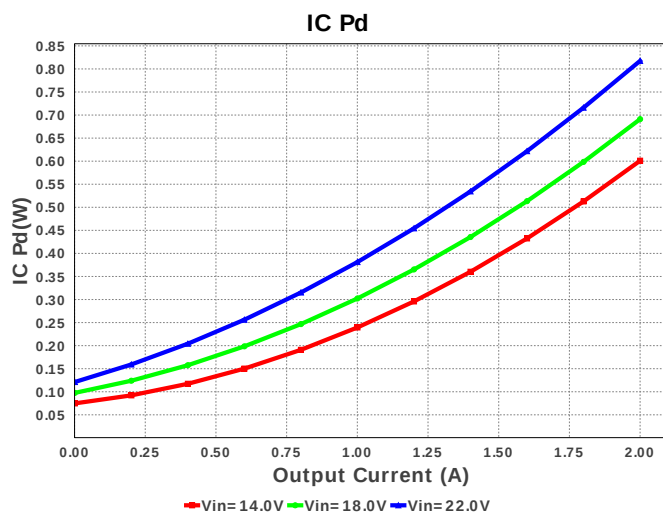
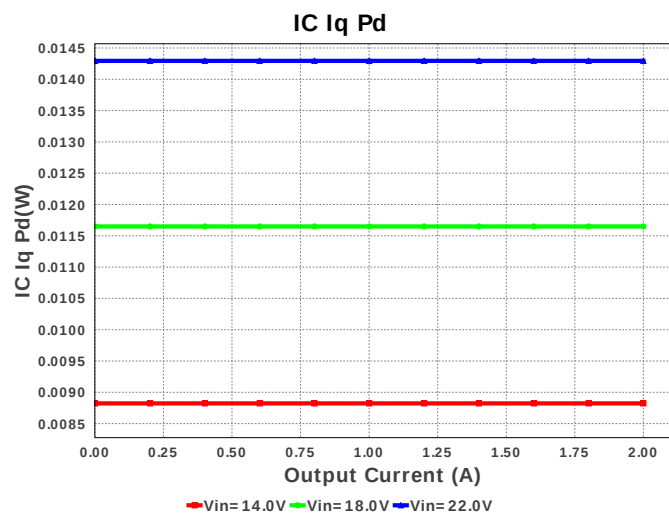
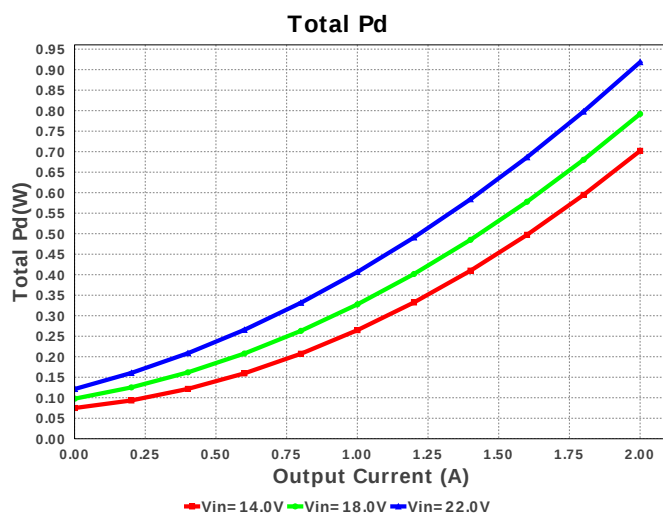
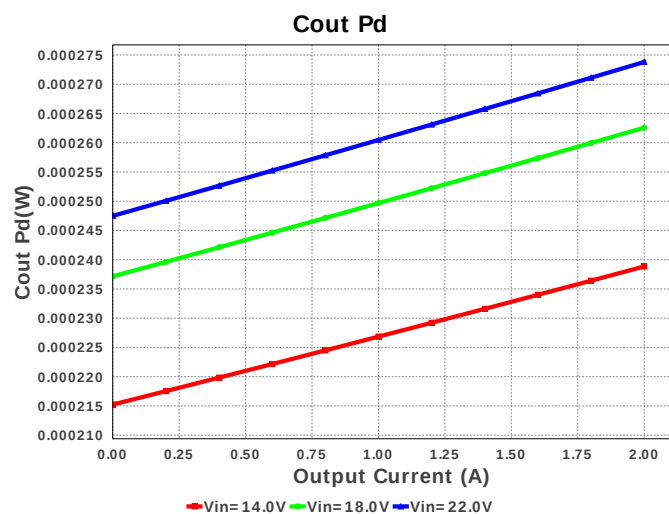
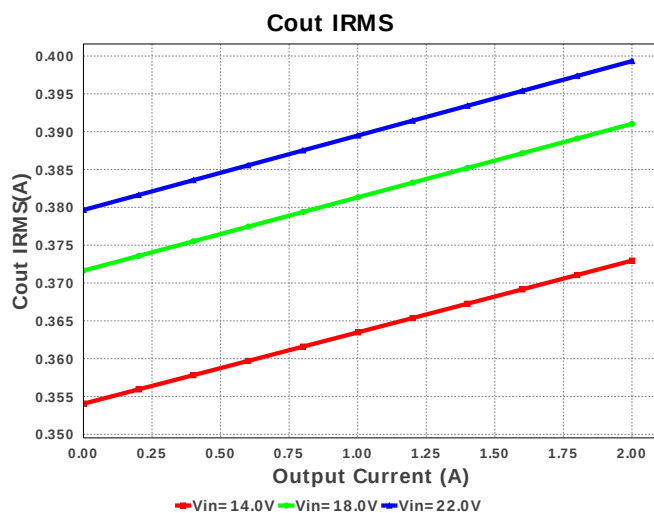
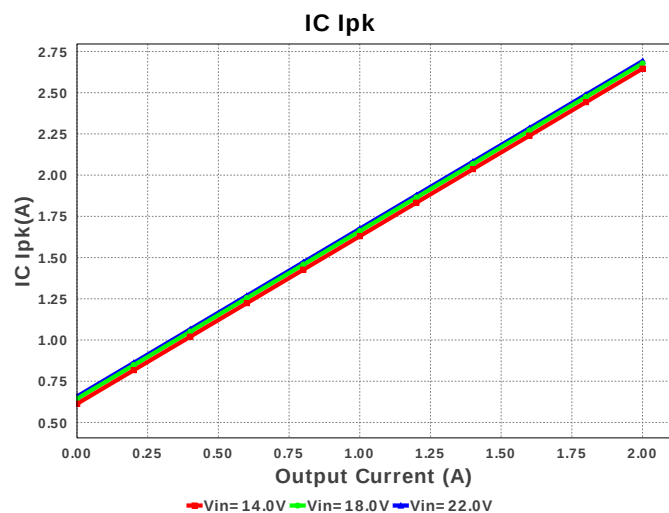


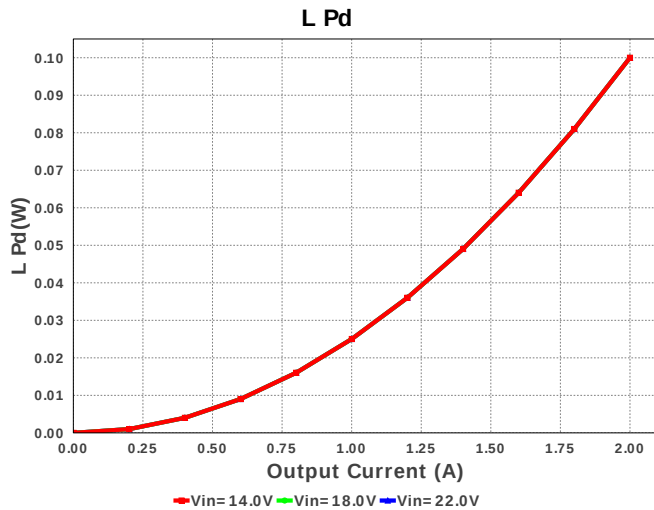
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Topology = Buck
Created = 7/13/16 12:29:54 AM
BOM Cost = \$2.12
BOM Count = 12
Total Pd = 0.92W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
11.	U1	Texas Instruments	TPS54339DDAR	Switcher	1	\$0.85	 DDA0008E 57 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	729.057 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	399.33 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	2.692 A	Current	Peak switch current in IC
4.	Iin Avg	341.74 mA	Current	Average input current
5.	L Ipp	1.383 A	Current	Peak-to-peak inductor ripple current
6.	BOM Count	12	General	Total Design BOM count
7.	FootPrint	209.0 mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	646.308 kHz	General	Switching frequency
9.	Pout	6.6 W	General	Total output power
10.	Total BOM	\$2.12	General	Total BOM Cost
11.	Vout Actual	3.3 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
12.	Vout OP	3.3 V	Op_Point	Operational Output Voltage
13.	Duty Cycle	15.777 %	Op_point	Duty cycle
14.	Efficiency	87.786 %	Op_point	Steady state efficiency
15.	IC Tj	67.769 degC	Op_point	IC junction temperature
16.	ICThetaJA	46.2 degC/W	Op_point	IC junction-to-ambient thermal resistance
17.	IOUT_OP	2.0 A	Op_point	Iout operating point
18.	VIN_OP	22.0 V	Op_point	Vin operating point
19.	Vout p-p	6.165 mV	Op_point	Peak-to-peak output ripple voltage
20.	Cin Pd	533.651 μ W	Power	Input capacitor power dissipation
21.	Cout Pd	273.801 μ W	Power	Output capacitor power dissipation
22.	IC Iq Pd	14.294 mW	Power	IC Iq Pd
23.	IC Pd	817.506 mW	Power	IC power dissipation
24.	L Pd	100.0 mW	Power	Inductor power dissipation
25.	Total Pd	918.283 mW	Power	Total Power Dissipation
26.	Vout Tolerance	3.41 %		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	TPS54339	Texas Instruments Base Part Number
6.	source	DC	Input Source Type
7.	ta	30.0	Ambient temperature

Design Assistance

1. [TPS54339 Product Folder](http://www.ti.com/product/TPS54339) : <http://www.ti.com/product/TPS54339> : contains the data sheet and other resources.

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