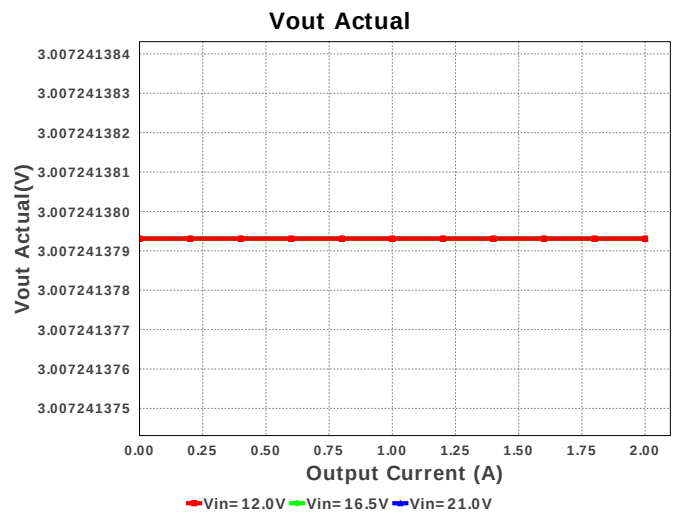
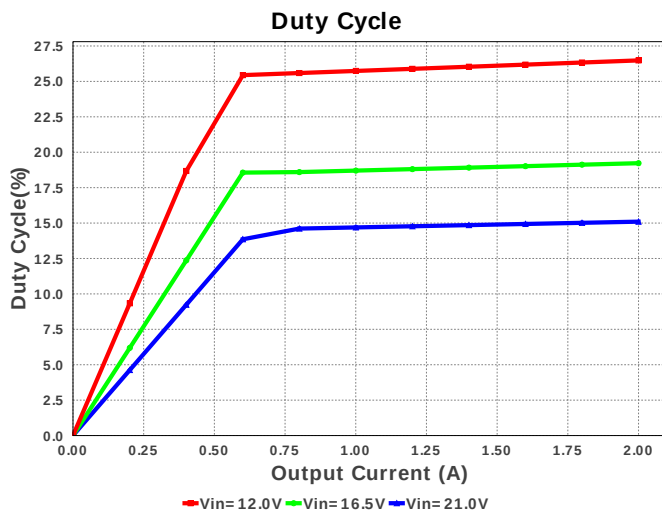
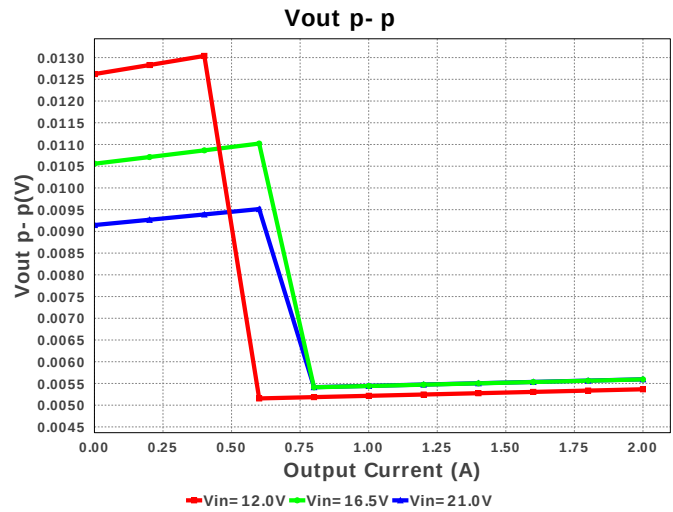
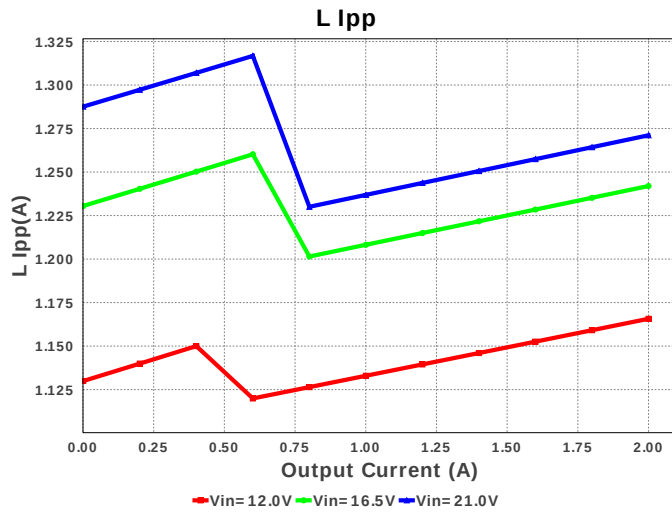
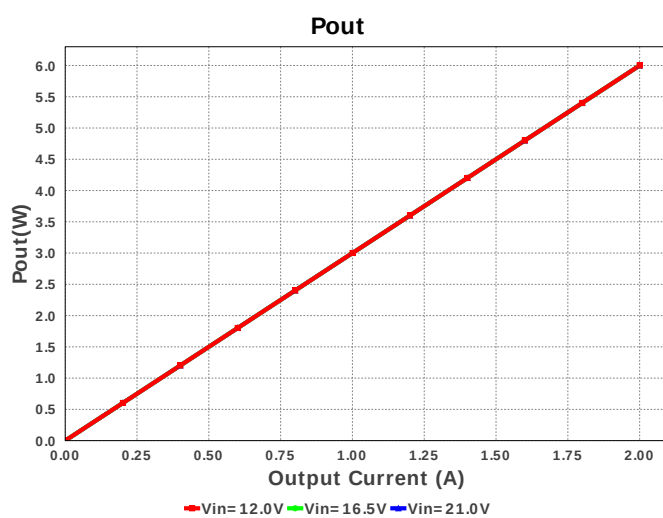
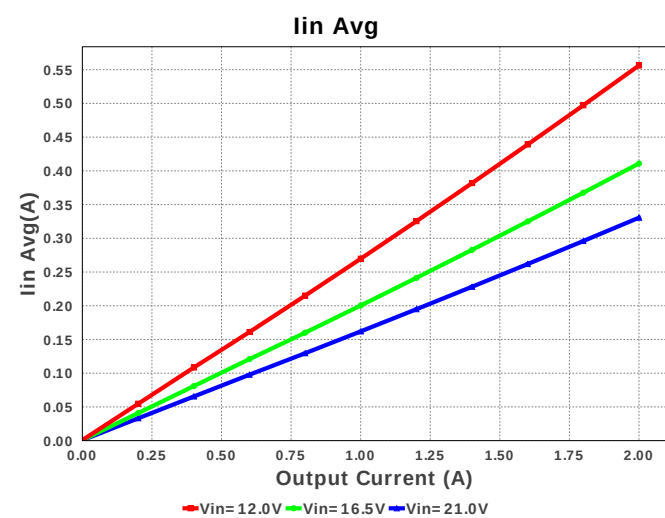
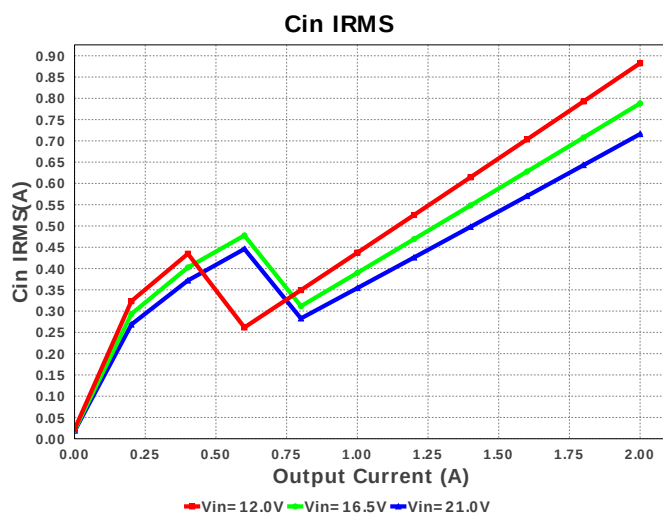
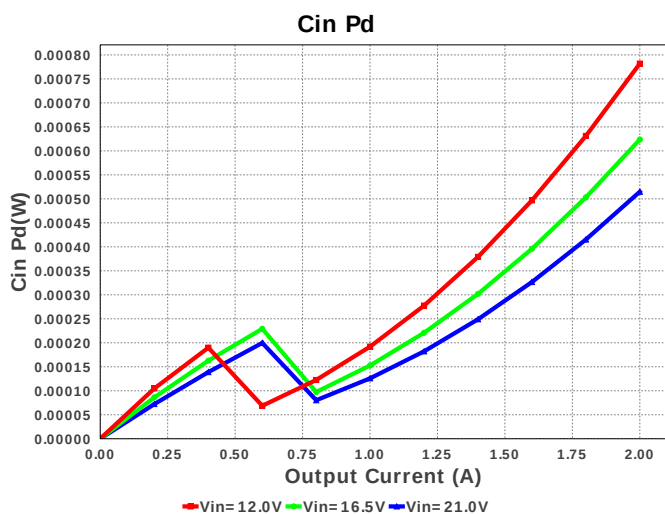
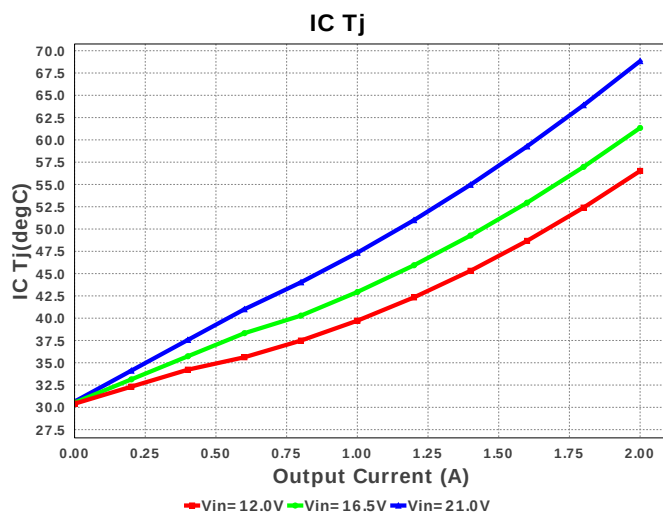
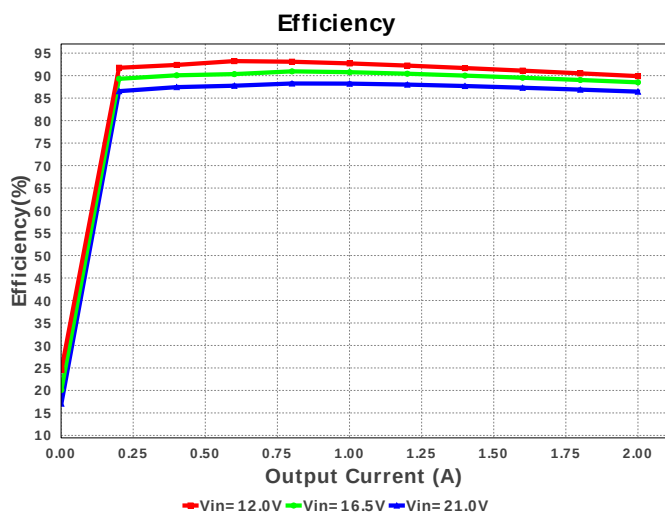


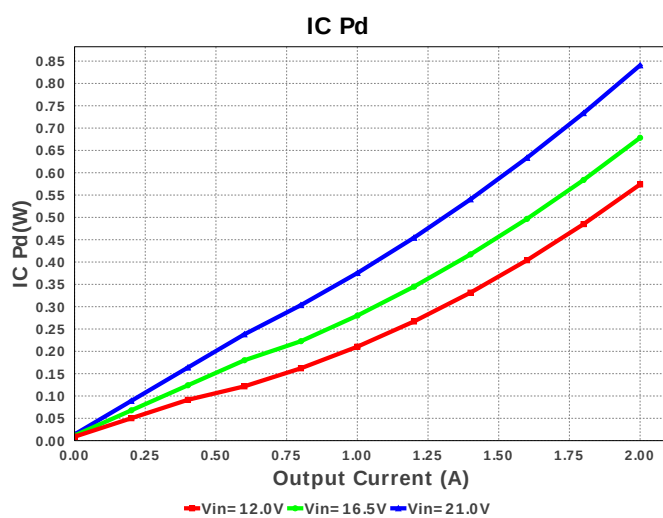
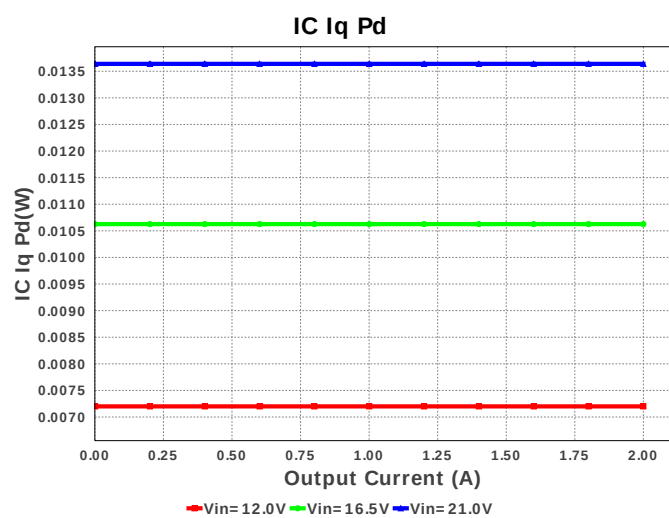
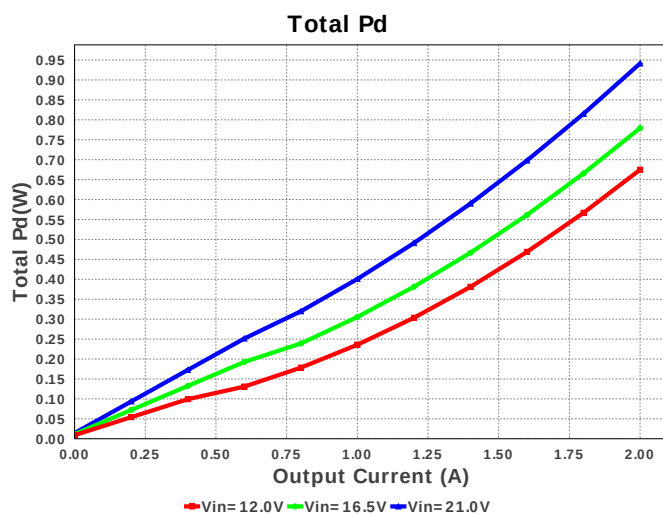
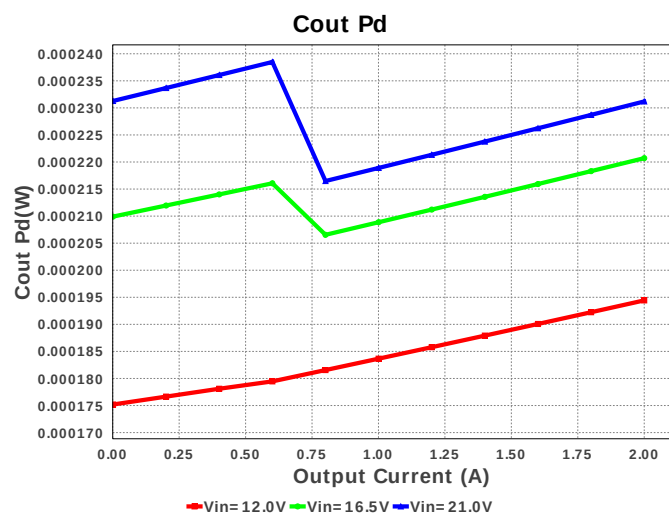
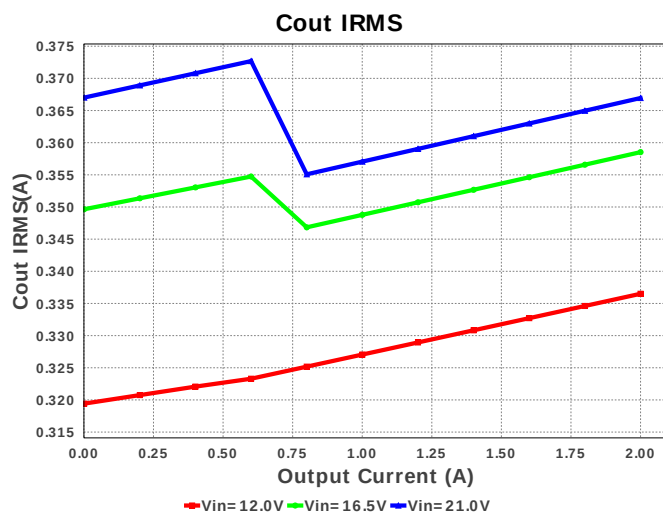
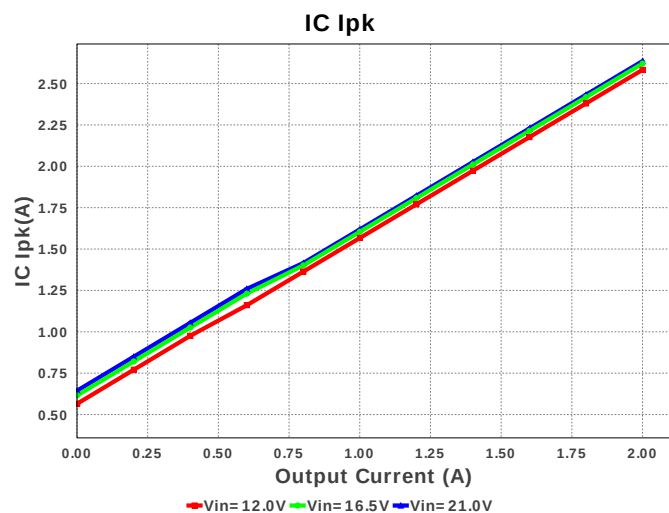


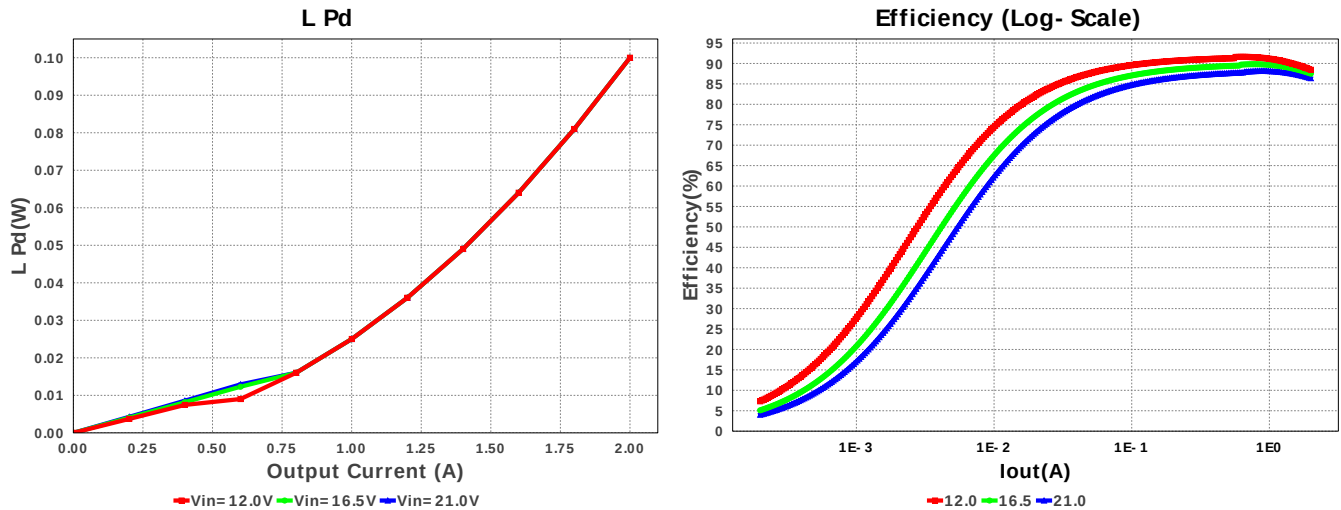
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Topology = Buck
Created = 7/19/16 6:50:18 AM
BOM Cost = \$2.14
BOM Count = 12
Total Pd = 0.94W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
11.	U1	Texas Instruments	TPS54339EDDAR	Switcher	1	\$0.87	 DDA0008E 57 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	716.086 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	366.944 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	2.636 A	Current	Peak switch current in IC
4.	Iin Avg	330.54 mA	Current	Average input current
5.	L Ipp	1.271 A	Current	Peak-to-peak inductor ripple current
6.	BOM Count	12	General	Total Design BOM count
7.	FootPrint	210.0 mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	647.931 kHz	General	Switching frequency
9.	Pout	6.0 W	General	Total output power
10.	Total BOM	\$2.14	General	Total BOM Cost
11.	Vout Actual	3.007 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
12.	Vout OP	3.0 V	Op_Point	Operational Output Voltage
13.	Duty Cycle	15.099 %	Op_point	Duty cycle
14.	Efficiency	86.438 %	Op_point	Steady state efficiency
15.	IC Tj	68.836 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	21.0 V	Op_point	Vin operating point
19.	Vout p-p	5.595 mV	Op_point	Peak-to-peak output ripple voltage
20.	Cin Pd	514.831 μW	Power	Input capacitor power dissipation
21.	Cout Pd	231.19 μW	Power	Output capacitor power dissipation
22.	IC Iq Pd	13.639 mW	Power	IC Iq Pd
23.	IC Pd	840.606 mW	Power	IC power dissipation
24.	L Pd	100.0 mW	Power	Inductor power dissipation
25.	Total Pd	941.385 mW	Power	Total Power Dissipation
26.	Vout Tolerance	3.364 %		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	21.0	Maximum input voltage
3.	VinMin	12.0	Minimum input voltage
4.	Vout	3.0	Output Voltage
5.	base_pn	TPS54339E	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

1. **TPS54339E** Product Folder : <http://www.ti.com/product/TPS54339E> : contains the data sheet and other resources.

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