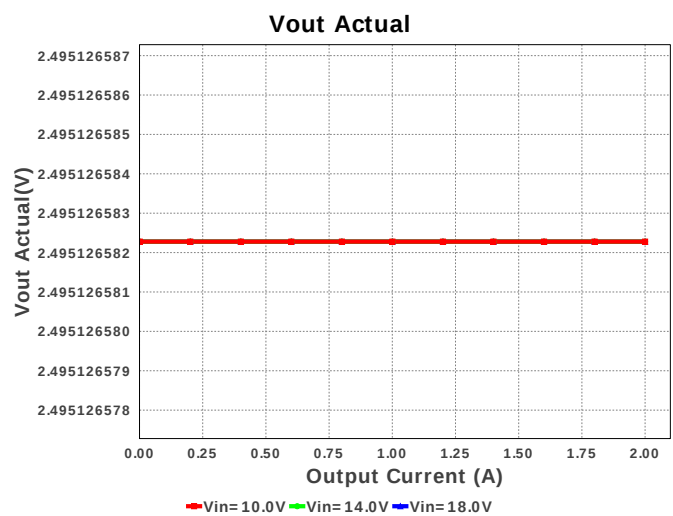
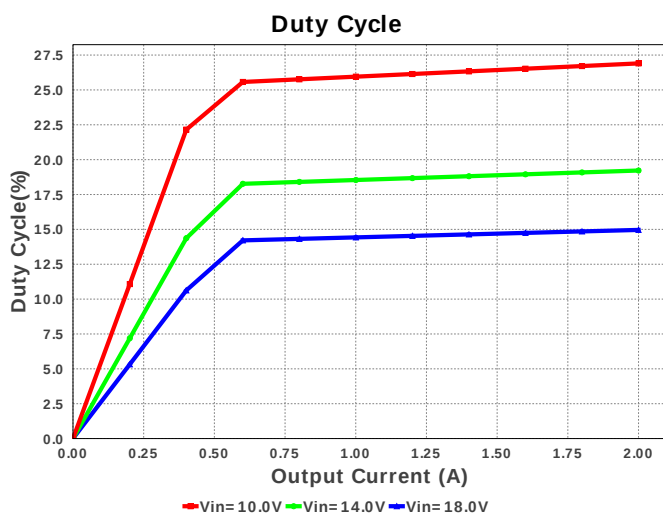
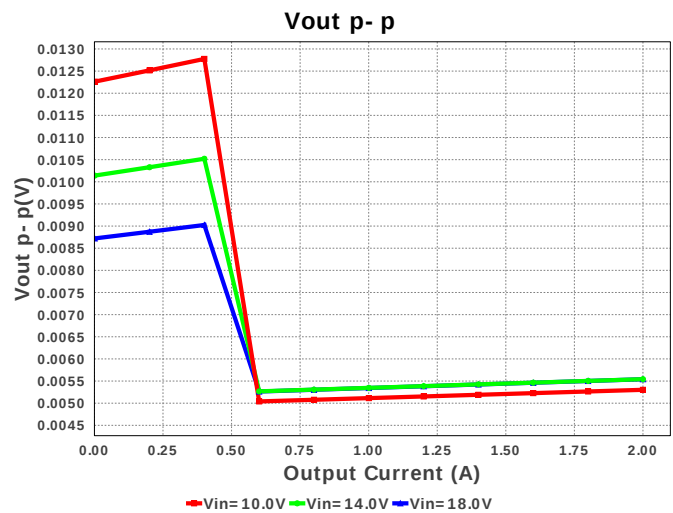
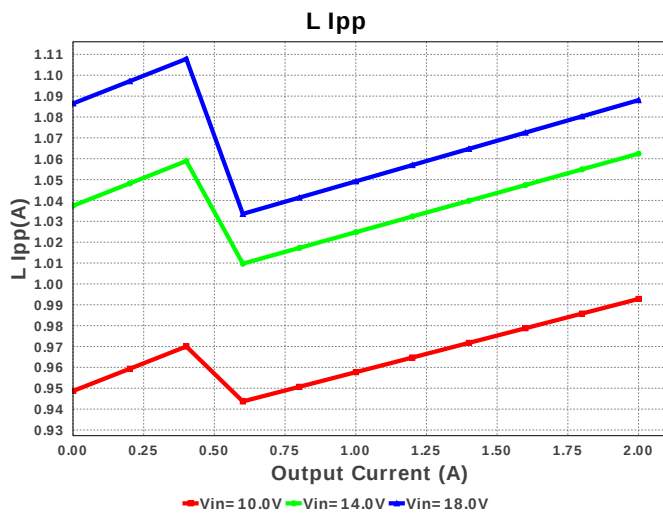
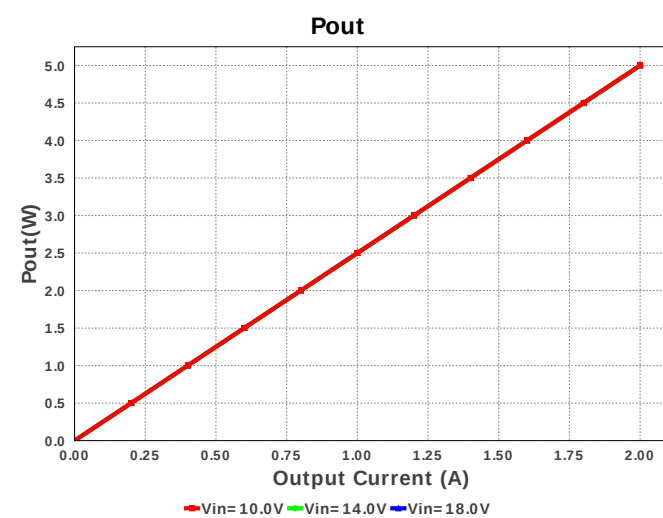
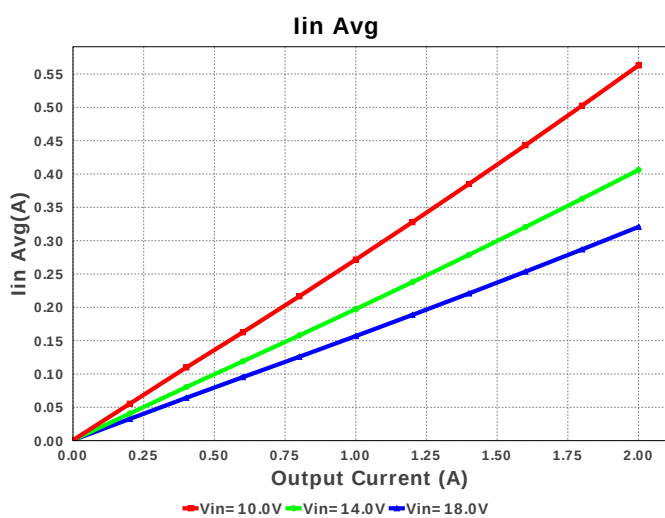
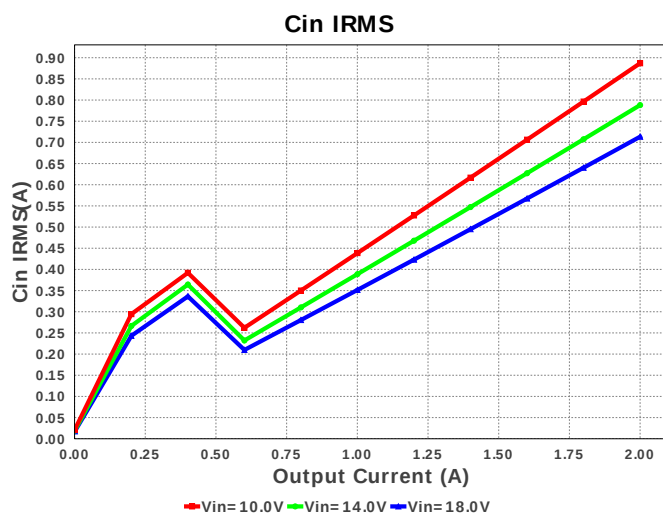
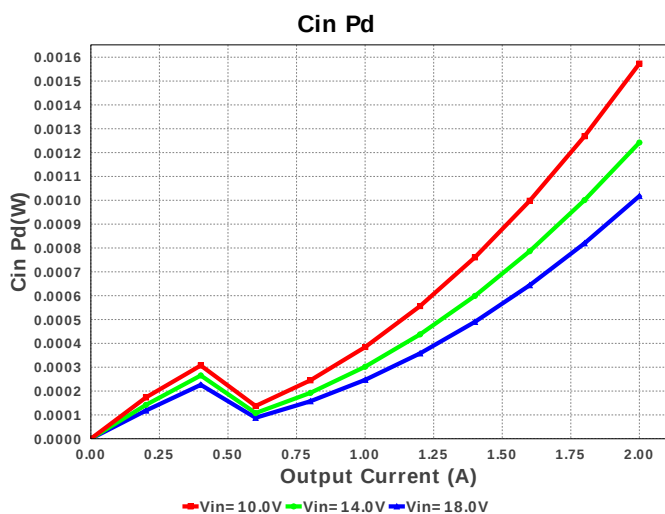
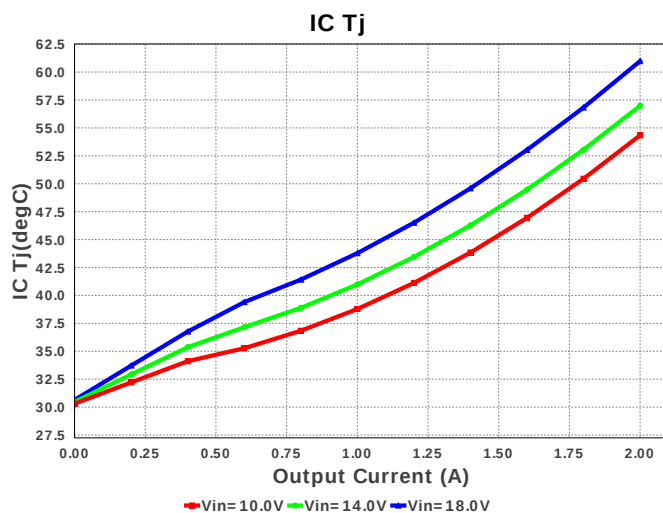
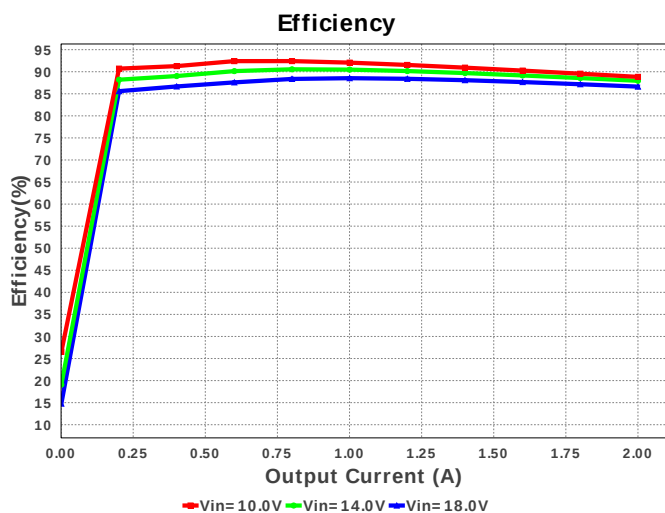


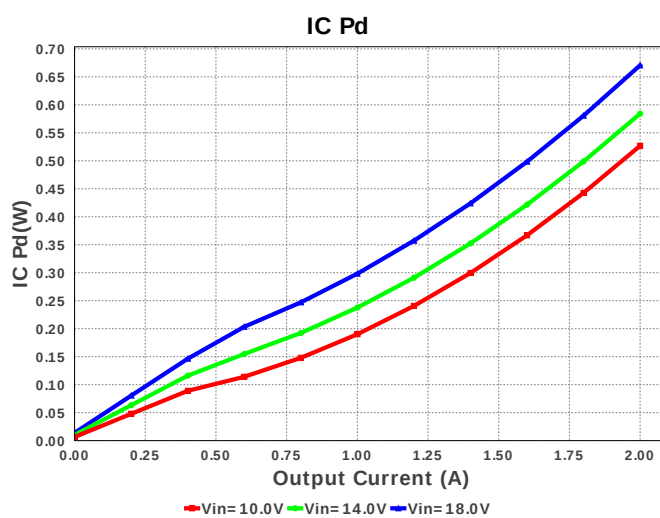
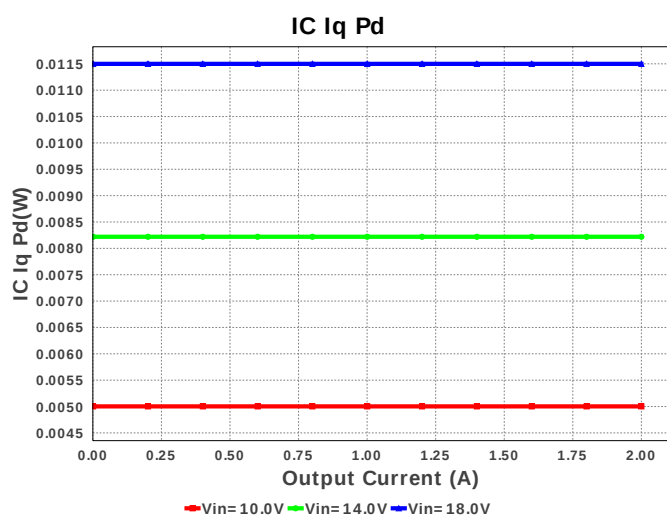
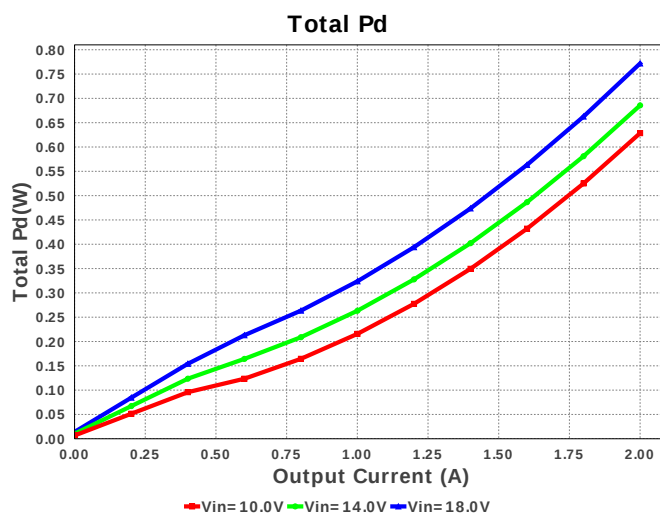
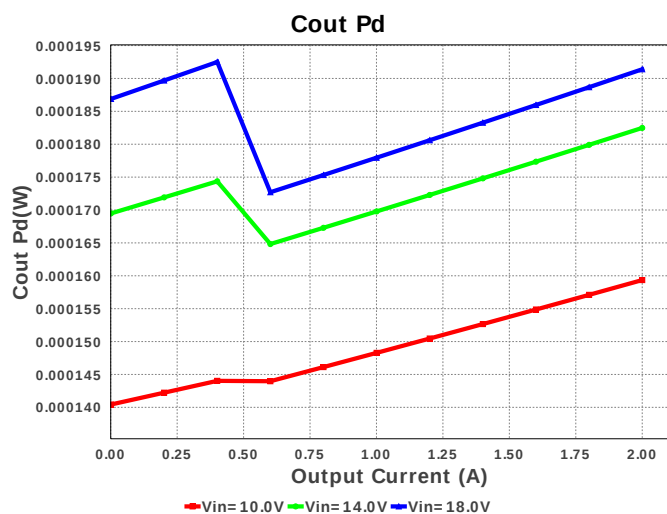
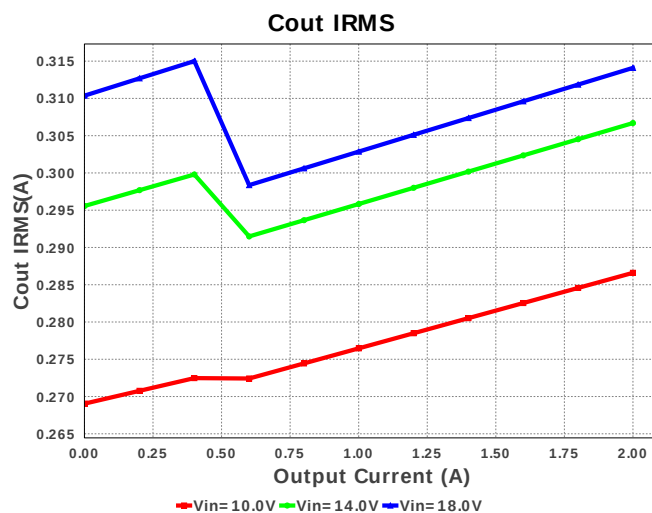
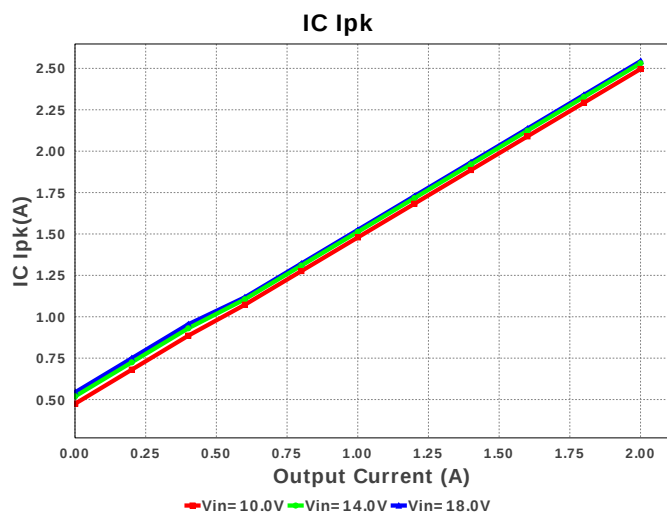


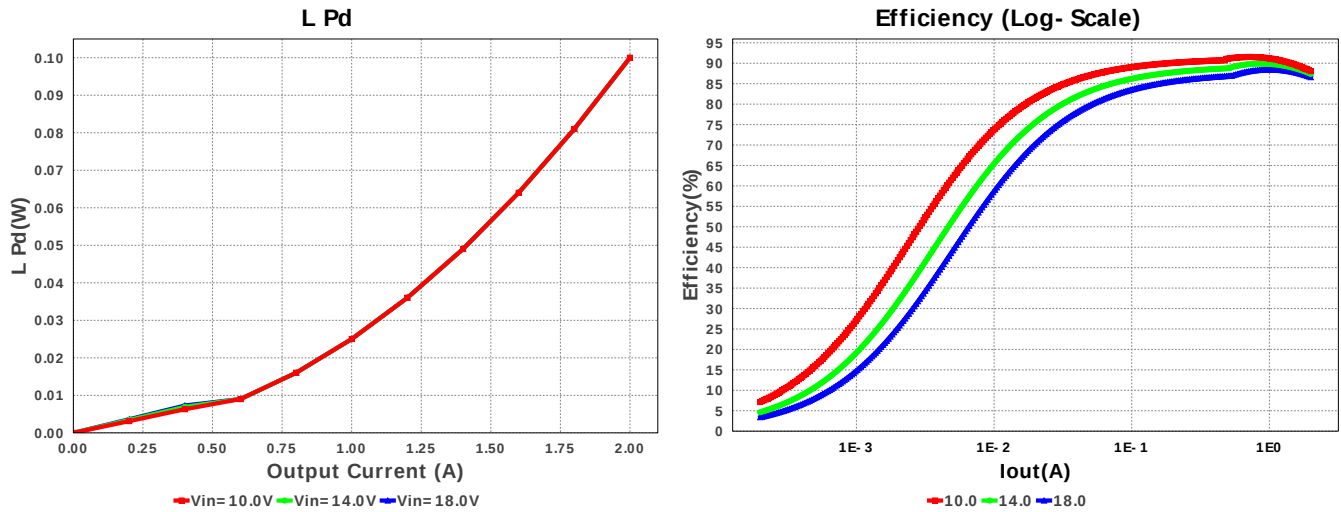
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Topology = Buck
Created = 7/13/16 1:44:19 AM
BOM Cost = \$1.53
BOM Count = 11
Total Pd = 0.77W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
11. U1		Texas Instruments	TPS54239EDDAR	Switcher	1	\$0.75	 DDA0008E 57 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	713.381 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	314.096 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	2.544 A	Current	Peak switch current in IC
4.	Iin Avg	320.66 mA	Current	Average input current
5.	L Ipp	1.088 A	Current	Peak-to-peak inductor ripple current
6.	BOM Count	11	General	Total Design BOM count
7.	FootPrint	189.0 mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	645.847 kHz	General	Switching frequency
9.	Pout	5.0 W	General	Total output power
10.	Total BOM	\$1.53	General	Total BOM Cost
11.	Vout Actual	2.495 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
12.	Vout OP	2.5 V	Op_Point	Operational Output Voltage
13.	Duty Cycle	14.961 %	Op_point	Duty cycle
14.	Efficiency	86.628 %	Op_point	Steady state efficiency
15.	IC Tj	60.981 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	18.0 V	Op_point	Vin operating point
19.	Vout p-p	5.541 mV	Op_point	Peak-to-peak output ripple voltage
20.	Cin Pd	1.018 mW	Power	Input capacitor power dissipation
21.	Cout Pd	191.394 μ W	Power	Output capacitor power dissipation
22.	IC Iq Pd	11.499 mW	Power	IC Iq Pd
23.	IC Pd	670.593 mW	Power	IC power dissipation
24.	L Pd	100.0 mW	Power	Inductor power dissipation
25.	Total Pd	771.816 mW	Power	Total Power Dissipation
26.	Vout Tolerance	3.257 %		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	18.0	Maximum input voltage
3.	VinMin	10.0	Minimum input voltage
4.	Vout	2.5	Output Voltage
5.	base_pn	TPS54239E	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

1. **TPS54239E** Product Folder : <http://www.ti.com/product/TPS54239E> : contains the data sheet and other resources.

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