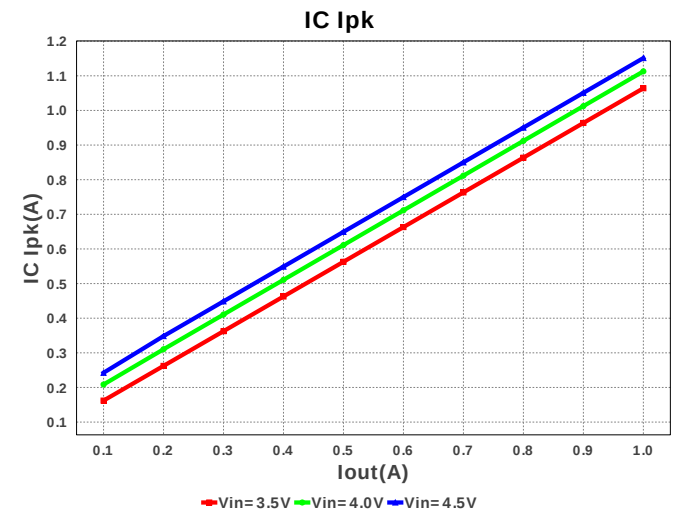
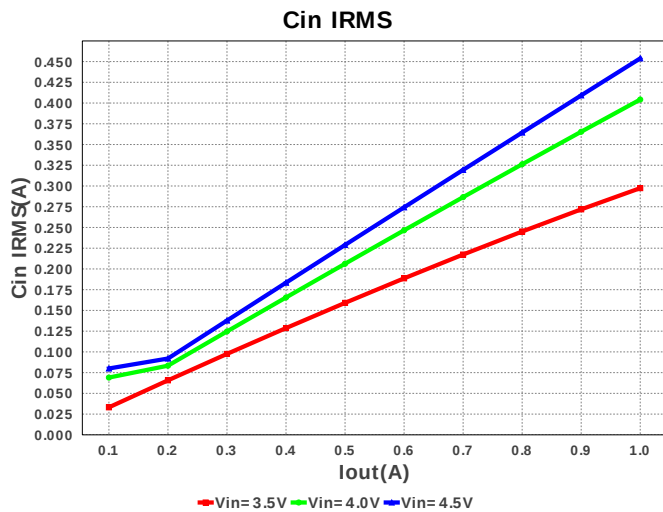
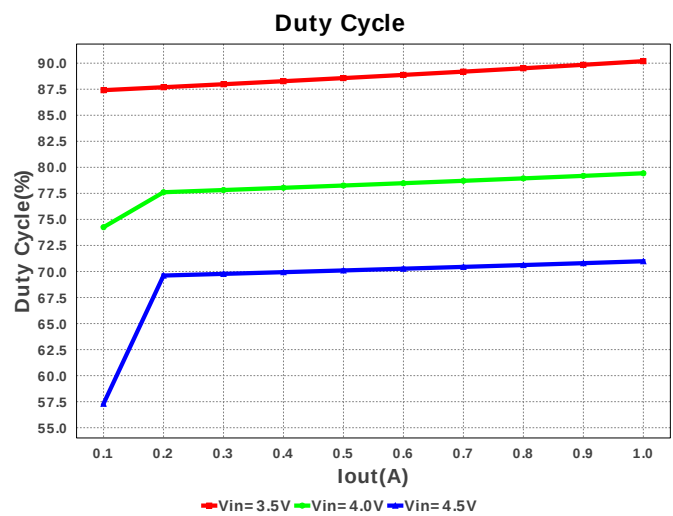
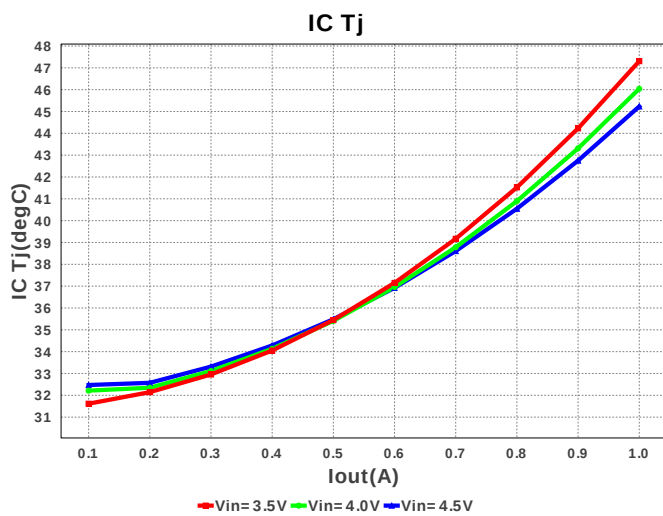
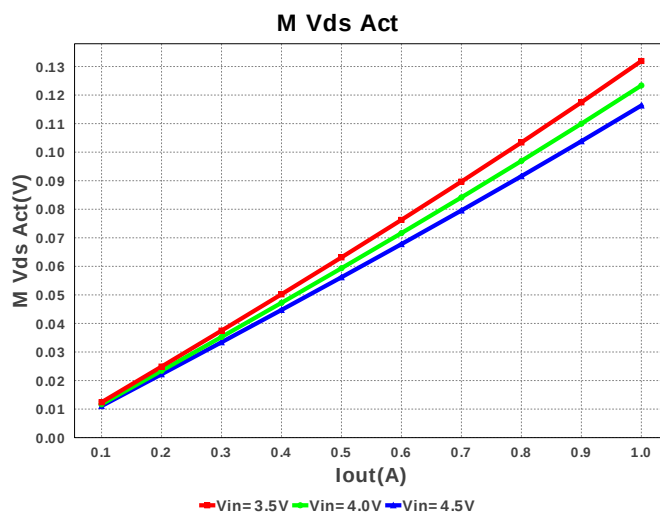
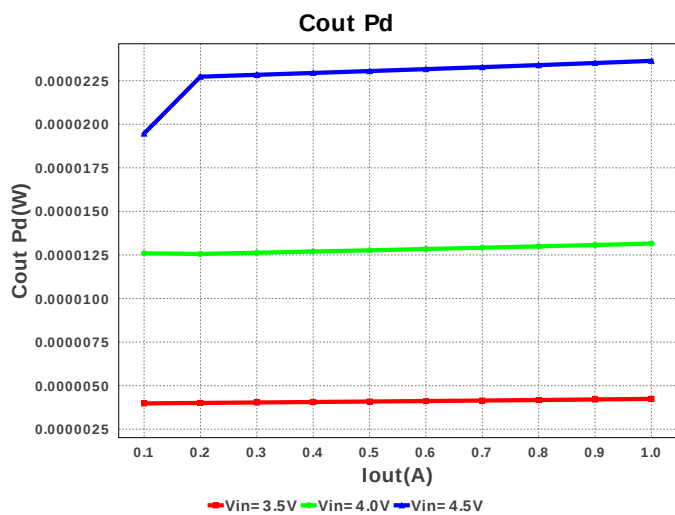
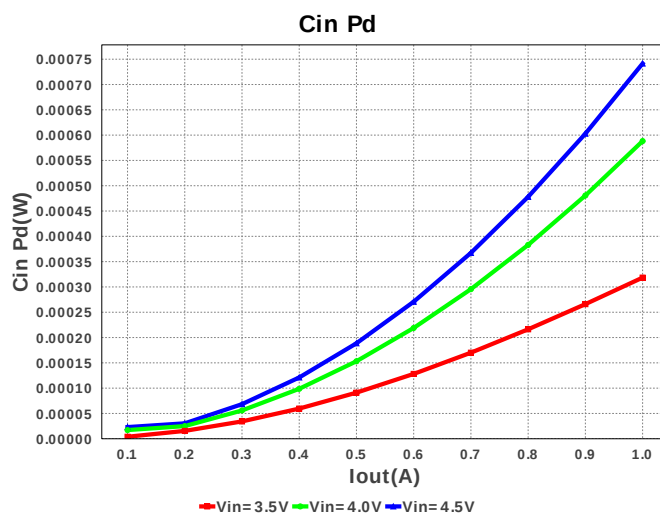
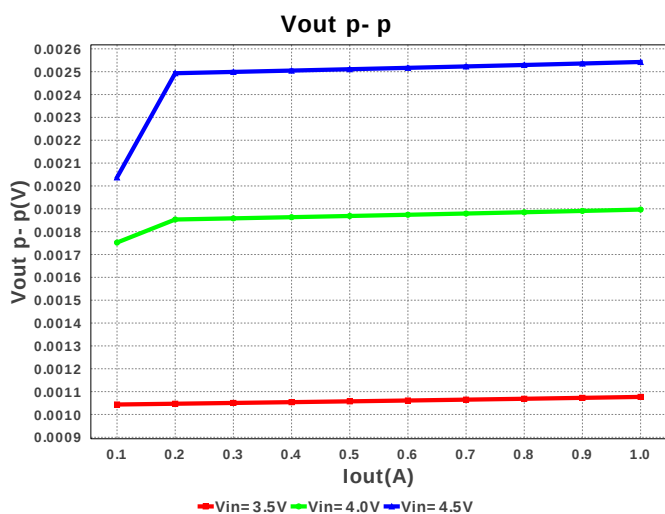
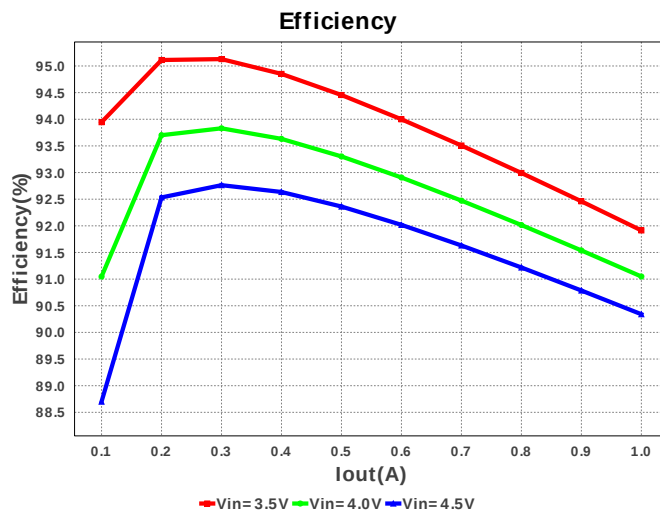
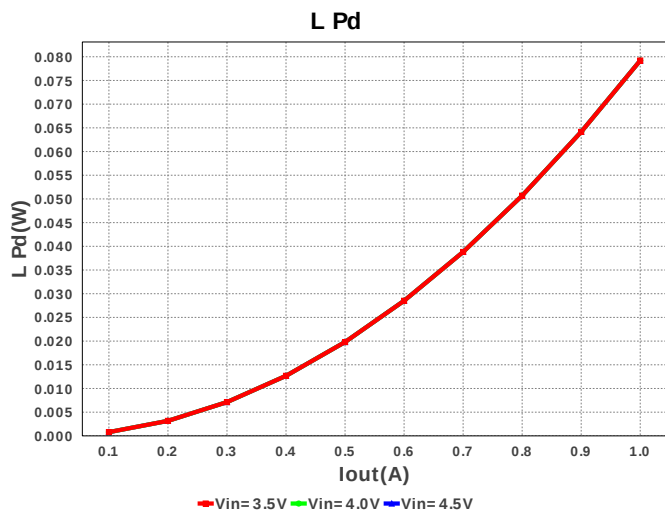


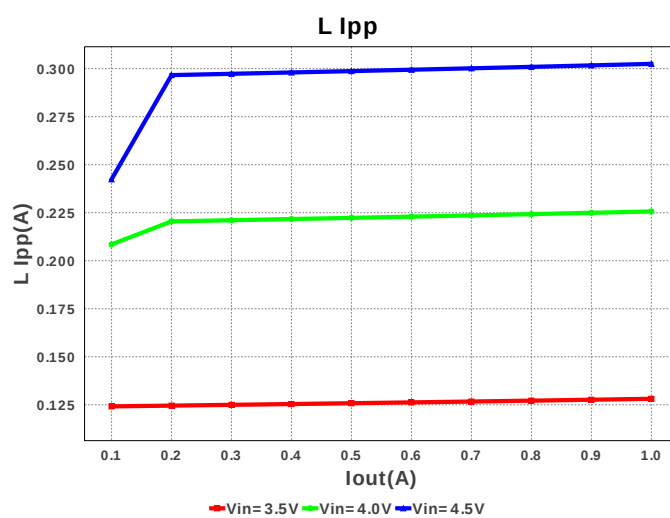
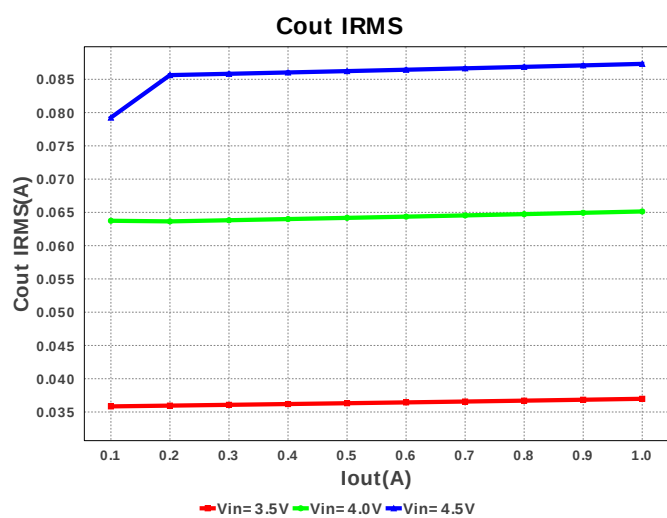
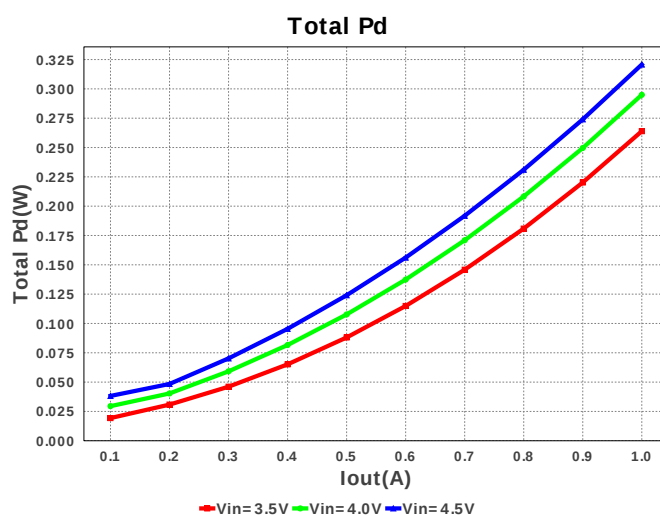
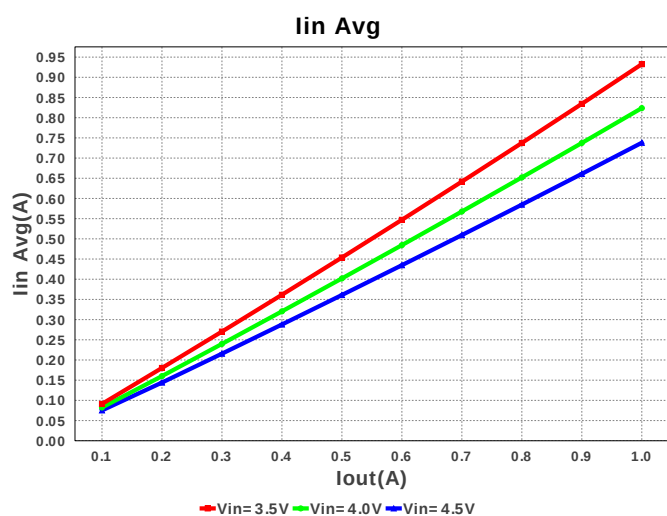
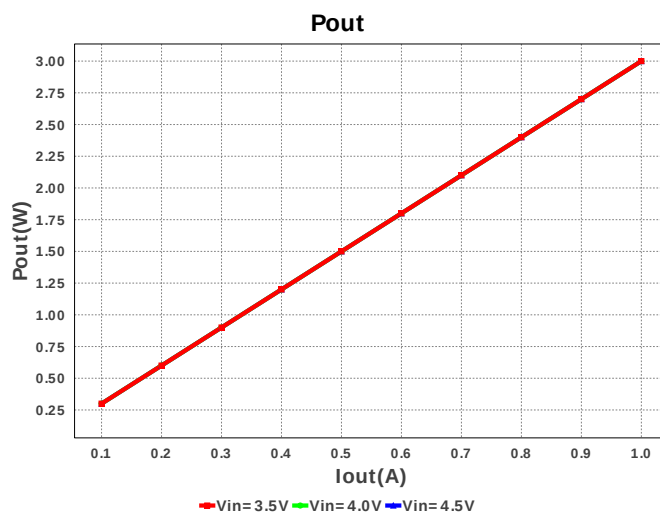
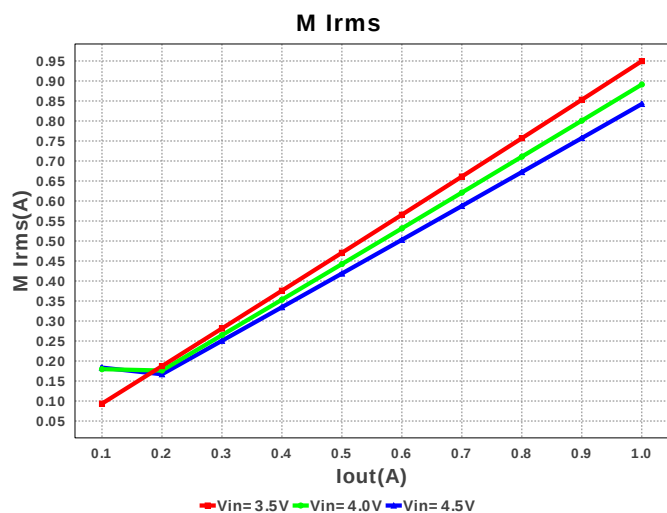


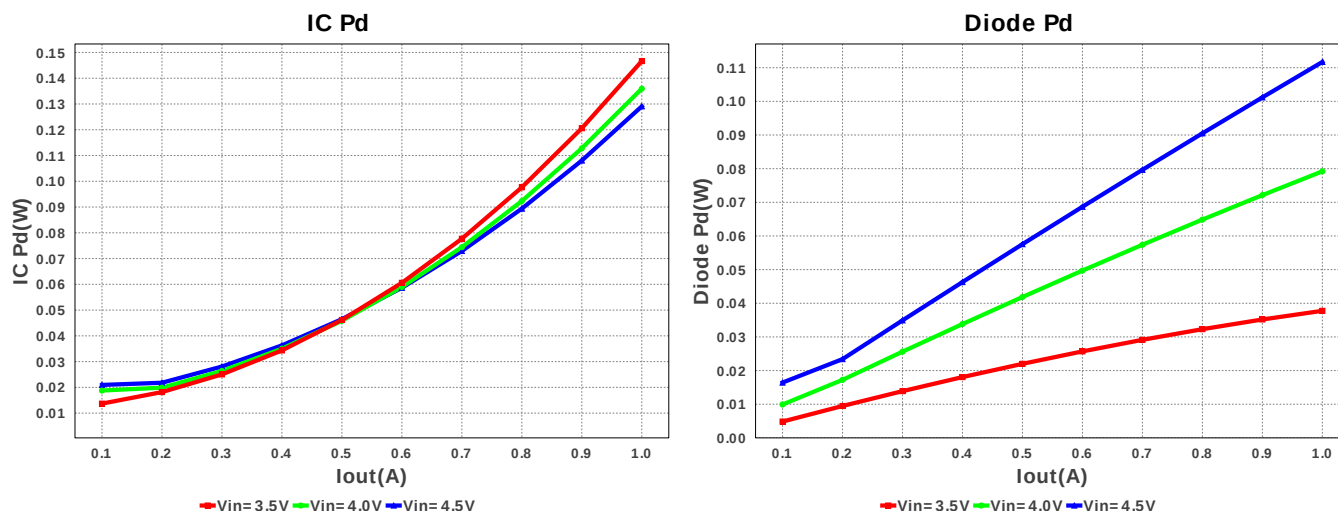
Device = LMR10515XMF/NOPB
Topology = Buck
Created = 6/3/13 10:24:00 PM
BOM Cost = \$0.64
BOM Count = 8
Total Pd = 0.32W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
7.	Rfb2	Vishay-Dale	CRCW040240K2FKED Series= CRCW..e3	Res= 40.2 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 8 mm ²
8.	U1	Texas Instruments	LMR10515XMF/NOPB	Switcher	1	\$0.35	 MF05A 24 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	453.834 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	87.321 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	1.151 A	Current	Peak switch current in IC
4.	Iin Avg	737.94 mA	Current	Average input current
5.	L Ipp	302.49 mA	Current	Peak-to-peak inductor ripple current
6.	M1 Irms	842.522 mA	Current	Q Iavg
7.	BOM Count	8	General	Total Design BOM count
8.	FootPrint	122.0 mm ²	General	Total Foot Print Area of BOM components
9.	Frequency	1.6 MHz	General	Switching frequency
10.	IC Tolerance	12.0 mV	General	IC Feedback Tolerance
11.	M Vds Act	116.346 mV	General	
12.	Pout	3.0 W	General	Total output power
13.	Total BOM	\$0.64	General	Total BOM Cost
14.	Duty Cycle	70.984 %	Op_point	Duty cycle
15.	Efficiency	90.341 %	Op_point	Steady state efficiency
16.	IC Tj	45.231 degC	Op_point	IC junction temperature
17.	ICThetaJA	118.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
18.	IOUT_OP	1.0 A	Op_point	Iout operating point
19.	VIN_OP	4.5 V	Op_point	Vin operating point
20.	Vout p-p	2.542 mV	Op_point	Peak-to-peak output ripple voltage
21.	Cin Pd	741.476 μW	Power	Input capacitor power dissipation
22.	Cout Pd	23.638 μW	Power	Output capacitor power dissipation
23.	Diode Pd	111.71 mW	Power	Diode power dissipation
24.	IC Pd	129.074 mW	Power	IC power dissipation
25.	L Pd	79.2 mW	Power	Inductor power dissipation
26.	Total Pd	320.749 mW	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	1.0	Maximum Output Current
2.	Iout1	1.0	Output Current #1
3.	VinMax	4.5	Maximum input voltage
4.	VinMin	3.5	Minimum input voltage
5.	Vout	3.0	Output Voltage
6.	Vout1	3.0	Output Voltage #1
7.	base_pn	LMR10515X	Base Product Number
8.	source	DC	Input Source Type
9.	Ta	30.0	Ambient temperature

Design Assistance

1. **LMR10515X** Product Folder : <http://www.ti.com/product/lmr10515> : contains the data sheet and other resources.

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