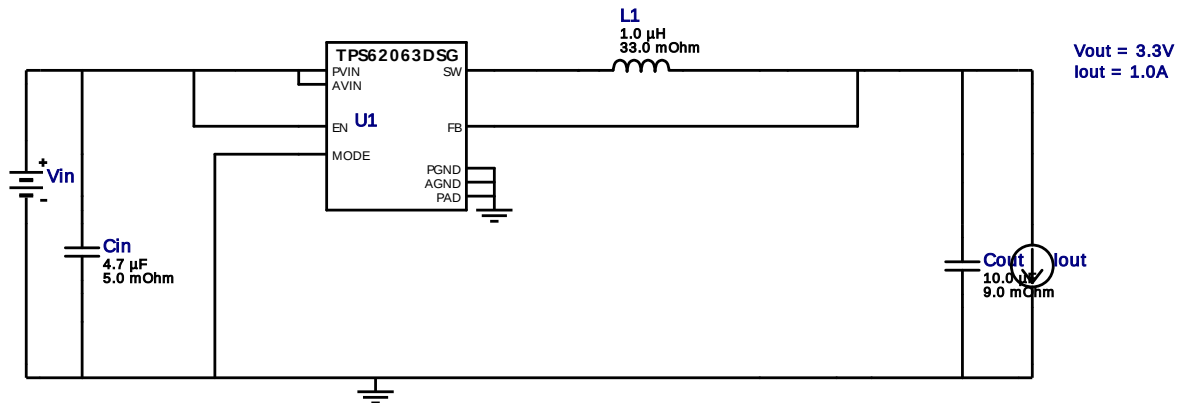


WEBENCH® Design Report

Design : 3893481/27 TPS62063DSGR
 TPS62063DSGR 3.6V-4.2V to 3.30V @ 1.0A

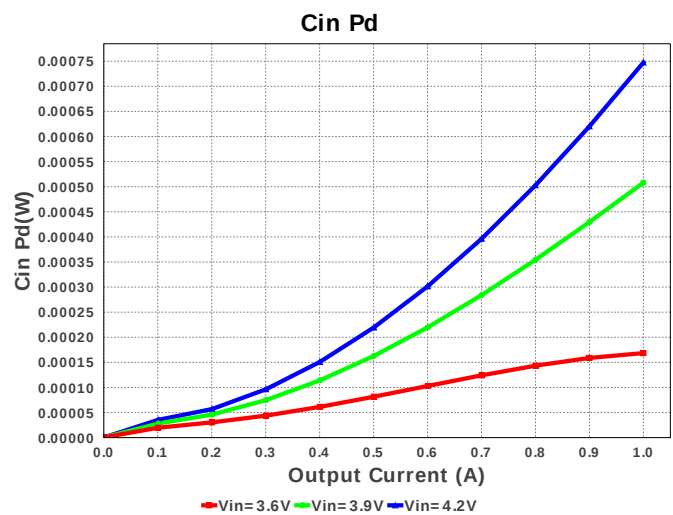
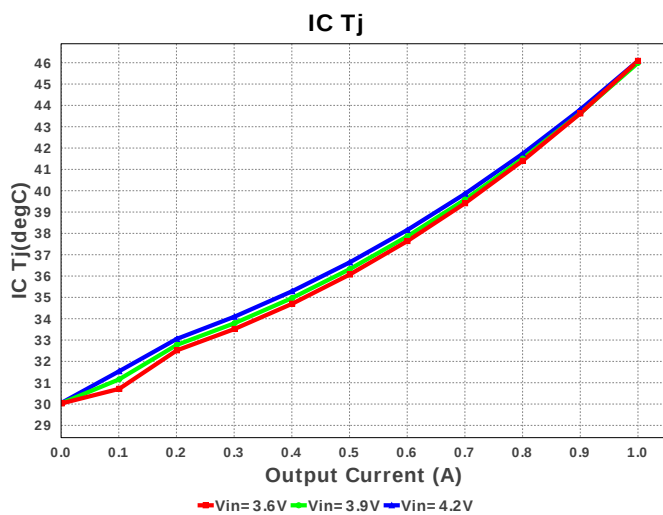
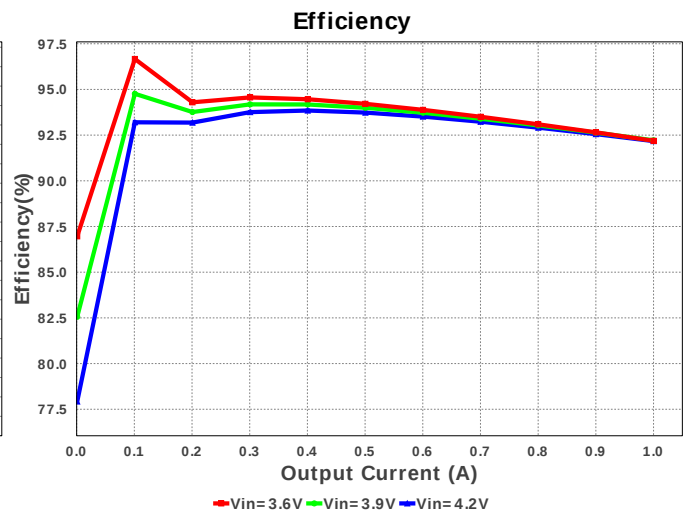
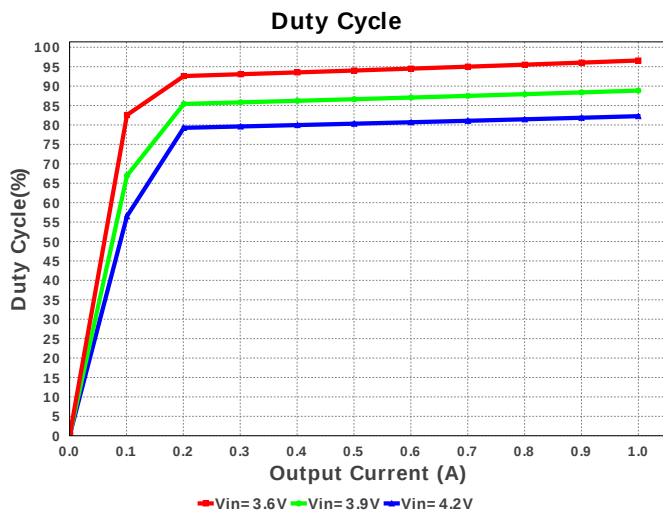
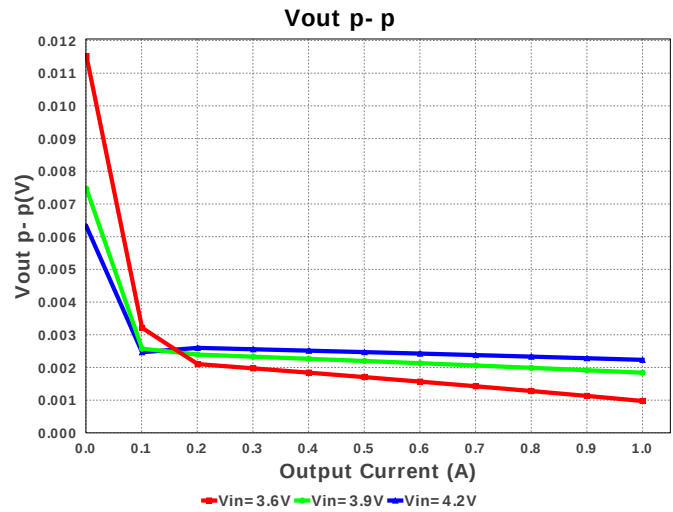
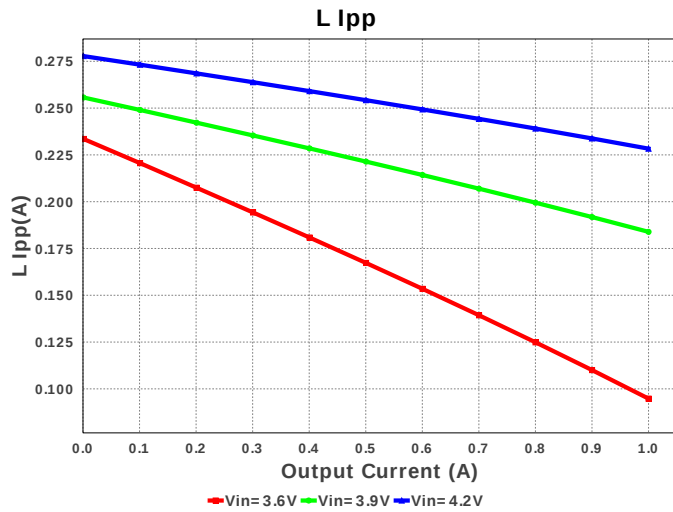


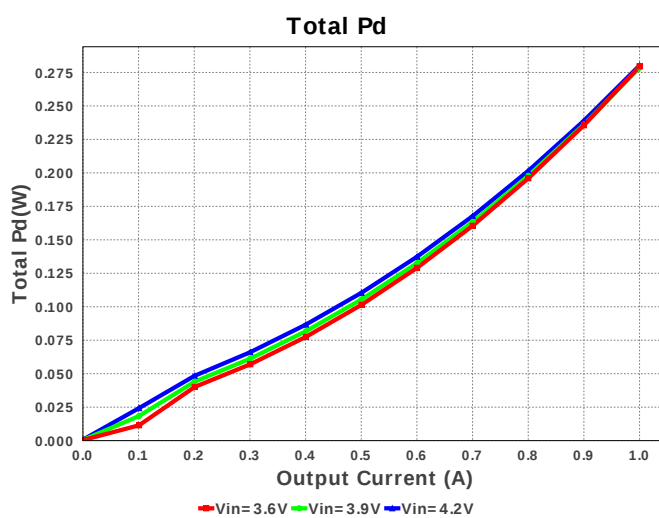
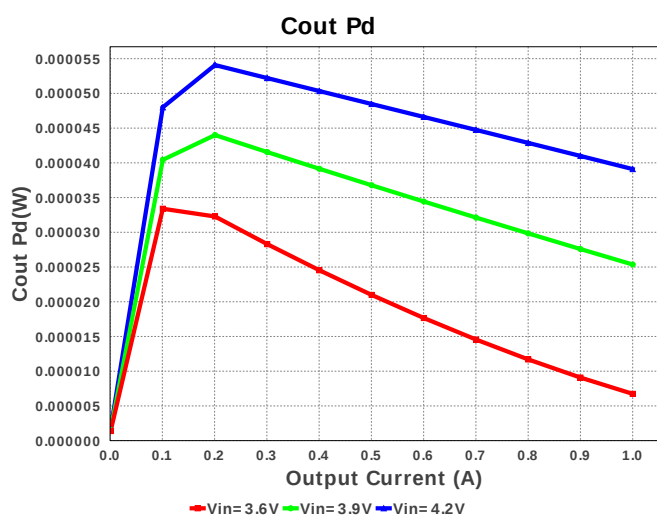
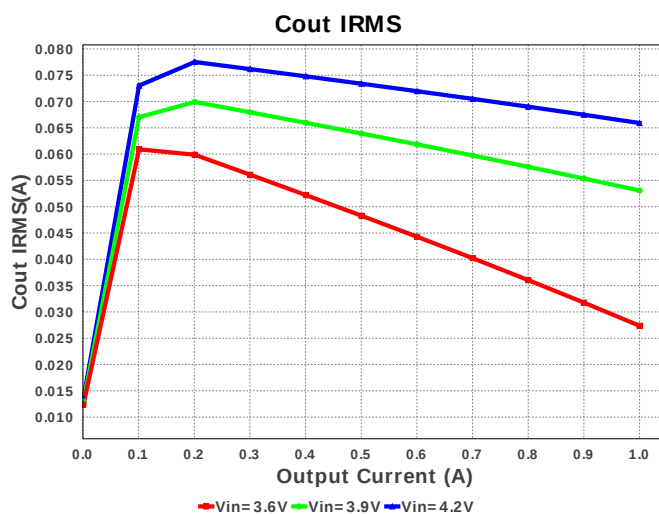
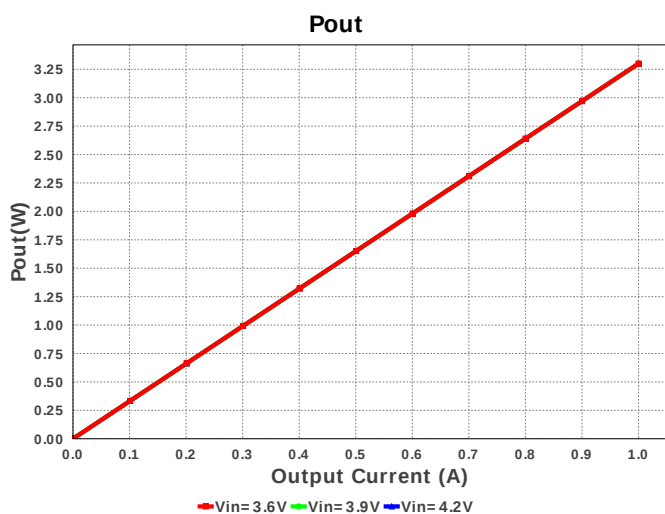
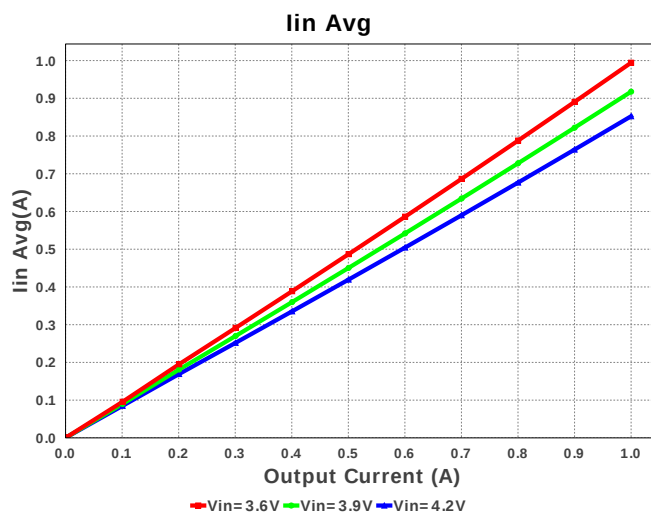
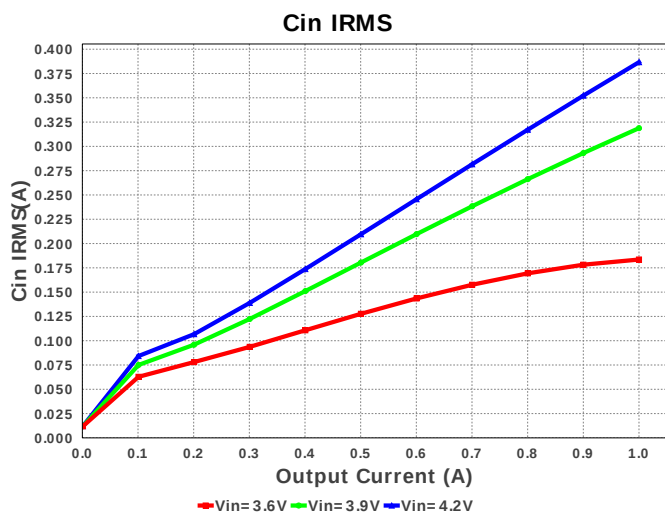
My Comments

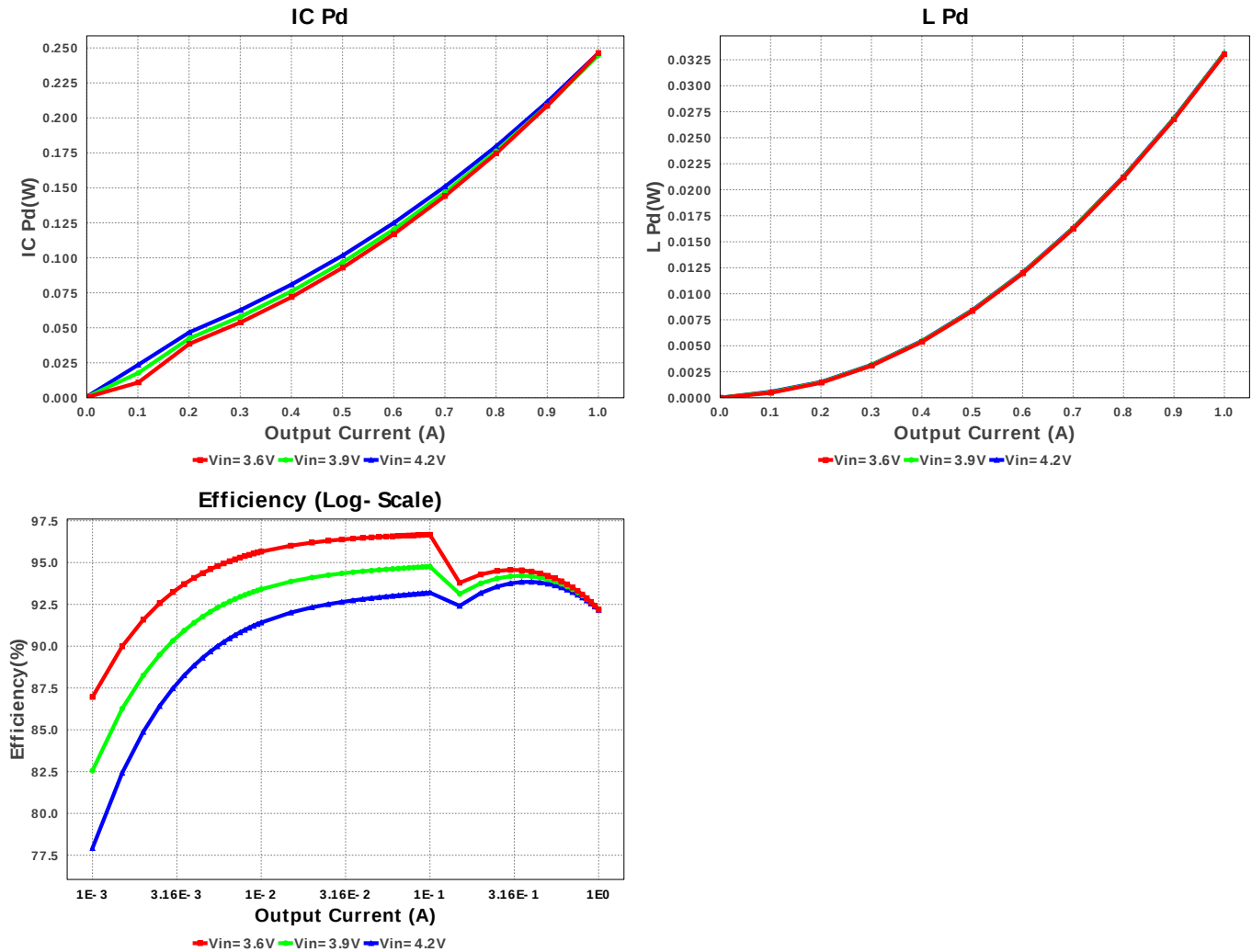
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Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cin	MuRata	GRM188R60J475KE19D Series= X5R	Cap= 4.7 uF ESR= 5.0 mOhm VDC= 6.3 V IRMS= 2.0 A	1	\$0.01	 0603 5 mm ²
2.	Cout	MuRata	GRM188R60J106ME47D Series= X5R	Cap= 10.0 uF ESR= 9.0 mOhm VDC= 6.3 V IRMS= 2.74 A	1	\$0.02	 0603 5 mm ²
3.	L1	Bourns	SDR0403-1R0ML	L= 1.0 uH DCR= 33.0 mOhm	1	\$0.18	 SDR0403 28 mm ²
4.	U1	Texas Instruments	TPS62063DSGR	Switcher	1	\$0.77	 DSG0008A 9 mm ²







Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	386.653 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	65.914 mA	Current	Output capacitor RMS ripple current
3.	Iin Avg	852.44 mA	Current	Average input current
4.	L Ipp	228.33 mA	Current	Peak-to-peak inductor ripple current
5.	BOM Count	4	General	Total Design BOM count
6.	FootPrint	46.0 mm ²	General	Total Foot Print Area of BOM components
7.	Frequency	3.0 MHz	General	Switching frequency
8.	Pout	3.3 W	General	Total output power
9.	Total BOM	\$0.98	General	Total BOM Cost
10.	Vout OP	3.3 V	Op_Point	Operational Output Voltage
11.	Duty Cycle	82.26 %	Op_point	Duty cycle
12.	Efficiency	92.173 %	Op_point	Steady state efficiency
13.	IC Tj	46.083 degC	Op_point	IC junction temperature
14.	ICThetaJA	65.3 degC/W	Op_point	IC junction-to-ambient thermal resistance
15.	IOUT_OP	1.0 A	Op_point	Iout operating point
16.	VIN_OP	4.2 V	Op_point	Vin operating point
17.	Vout p-p	2.147 mV	Op_point	Peak-to-peak output ripple voltage
18.	Cin Pd	747.503 μW	Power	Input capacitor power dissipation
19.	Cout Pd	39.101 μW	Power	Output capacitor power dissipation
20.	IC Pd	246.3 mW	Power	IC power dissipation
21.	L Pd	33.143 mW	Power	Inductor power dissipation
22.	Total Pd	280.226 mW	Power	Total Power Dissipation
23.	Vout Tolerance	272.727 m%		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	1.0	Maximum Output Current
2.	VinMax	4.2	Maximum input voltage
3.	VinMin	3.6	Minimum input voltage

#	Name	Value	Description
4.	Vout	3.3	Output Voltage
5.	base_pn	TPS62063	Texas Instruments Base Part Number
6.	source	DC	Input Source Type
7.	ta	30.0	Ambient temperature

Design Assistance

1. TPS62063 Product Folder : <http://www.ti.com/product/TPS62063> : contains the data sheet and other resources.

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