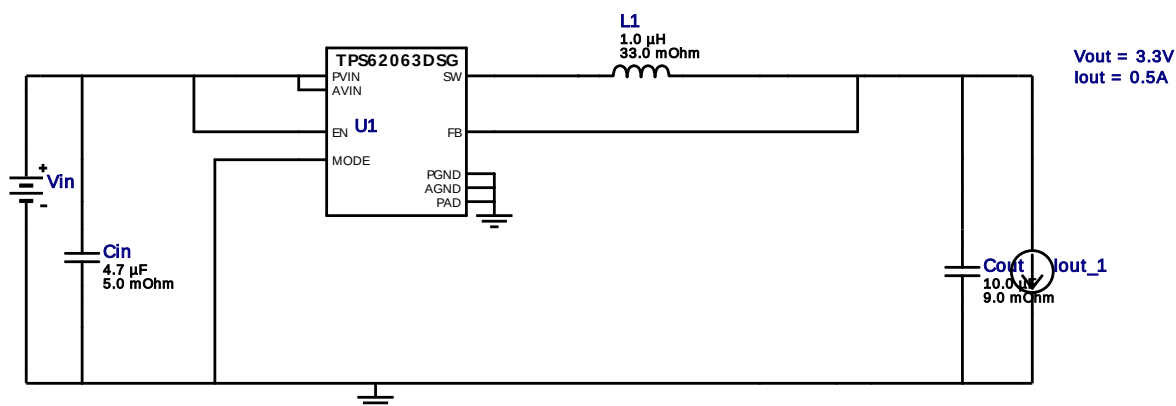


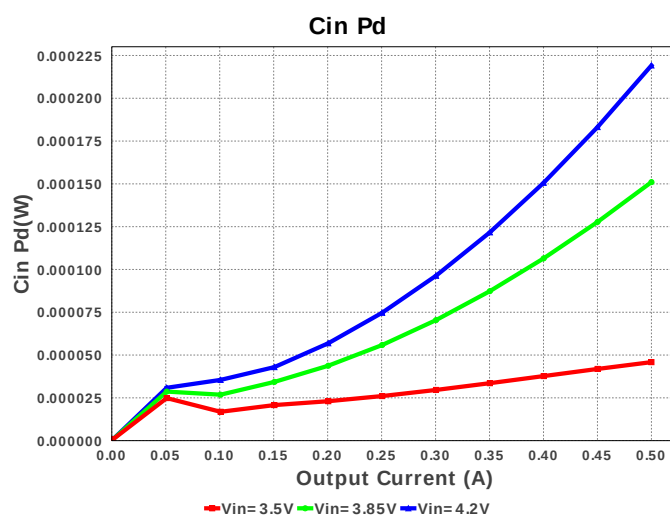
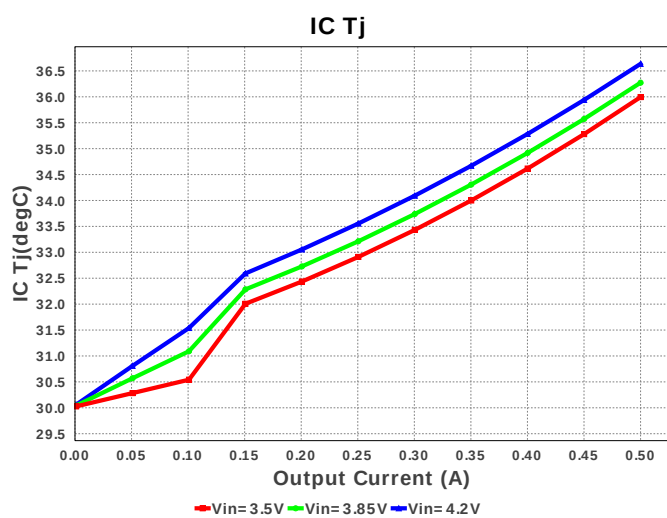
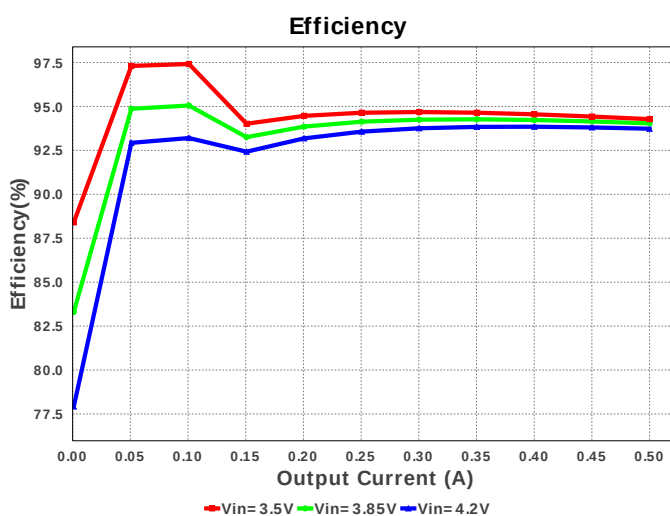
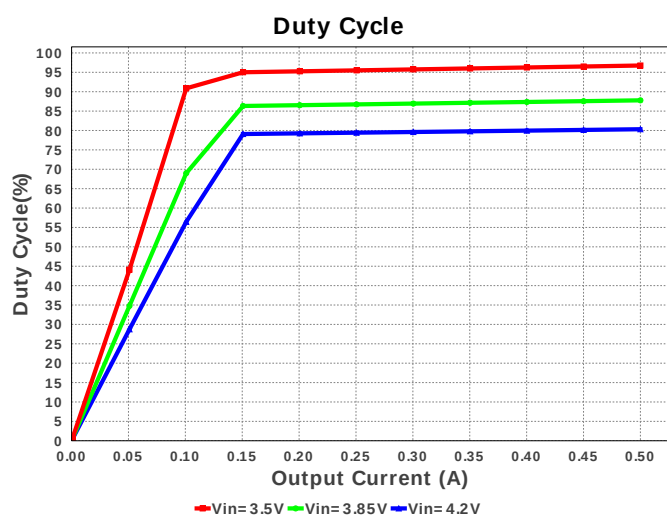
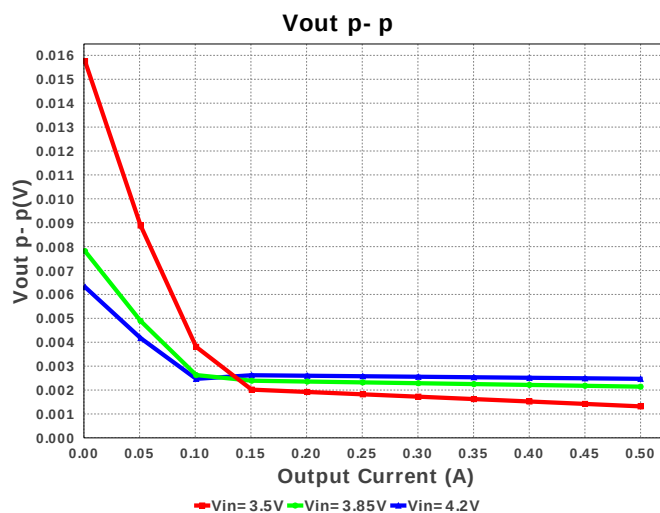
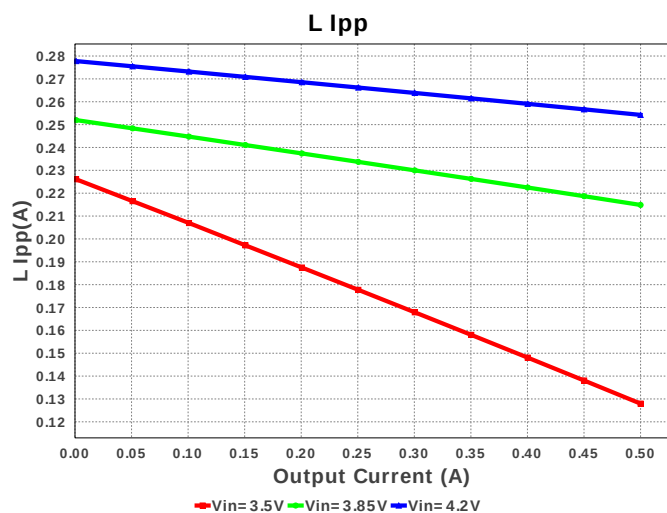
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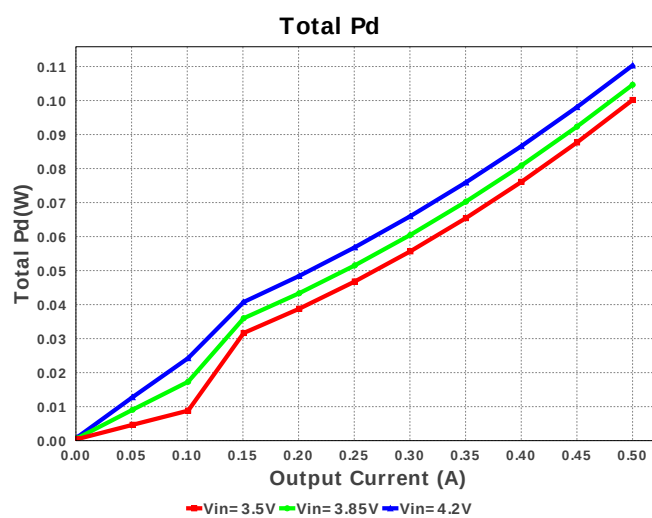
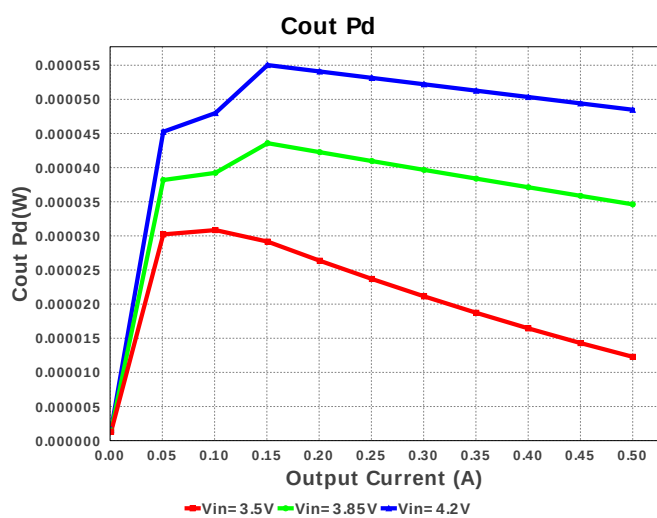
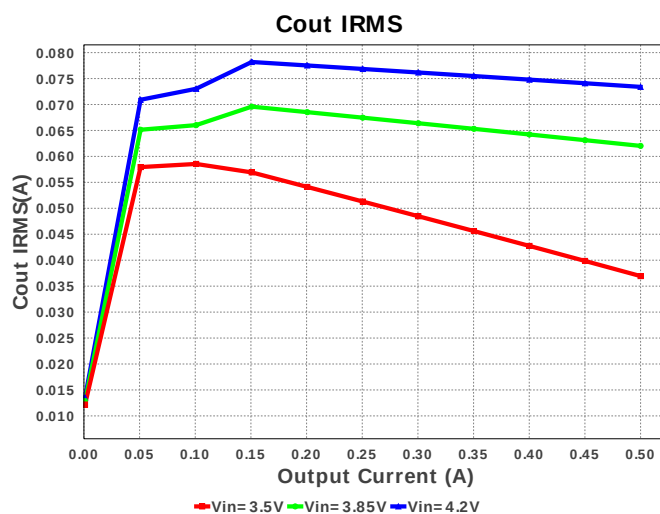
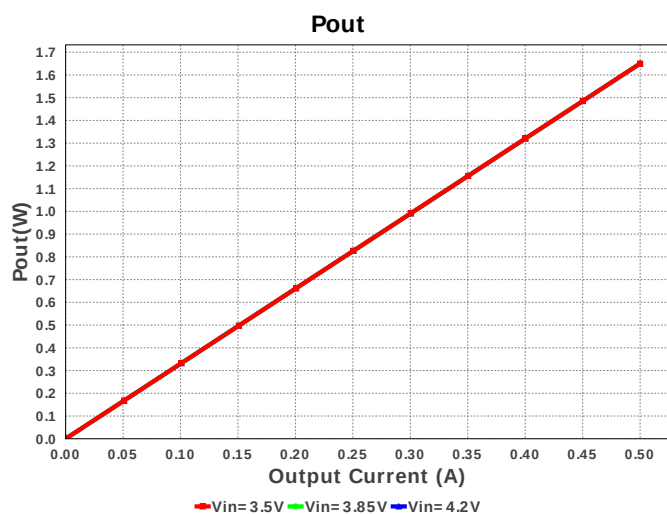
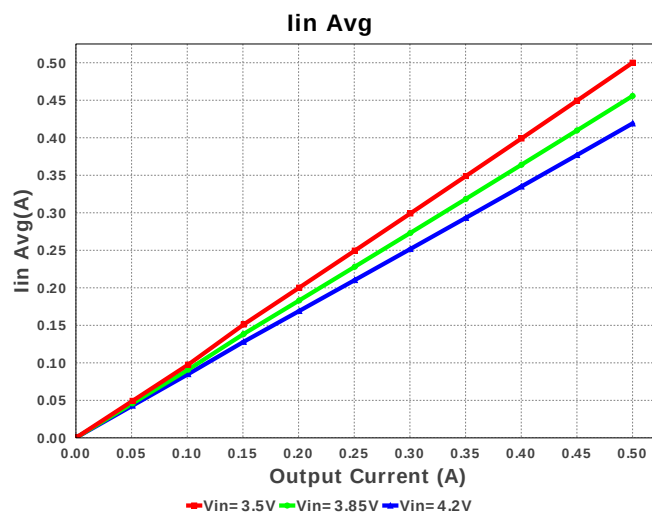
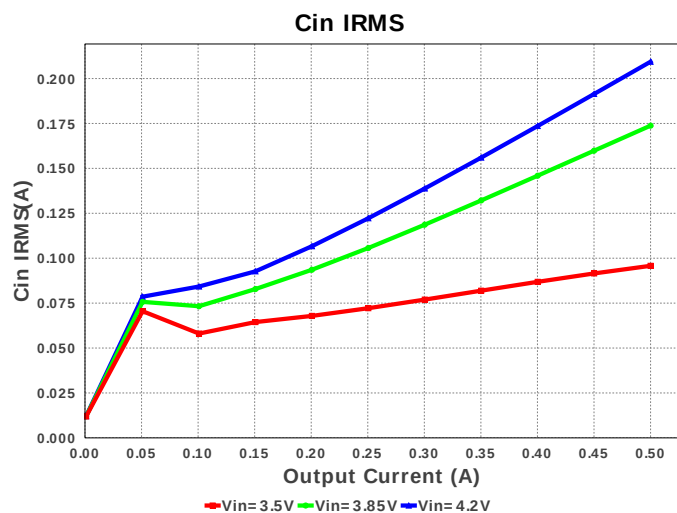
Design : 4738396/1 TPS62063DSGR
 TPS62063DSGR 3.5V-4.2V to 3.30V @ 0.5A

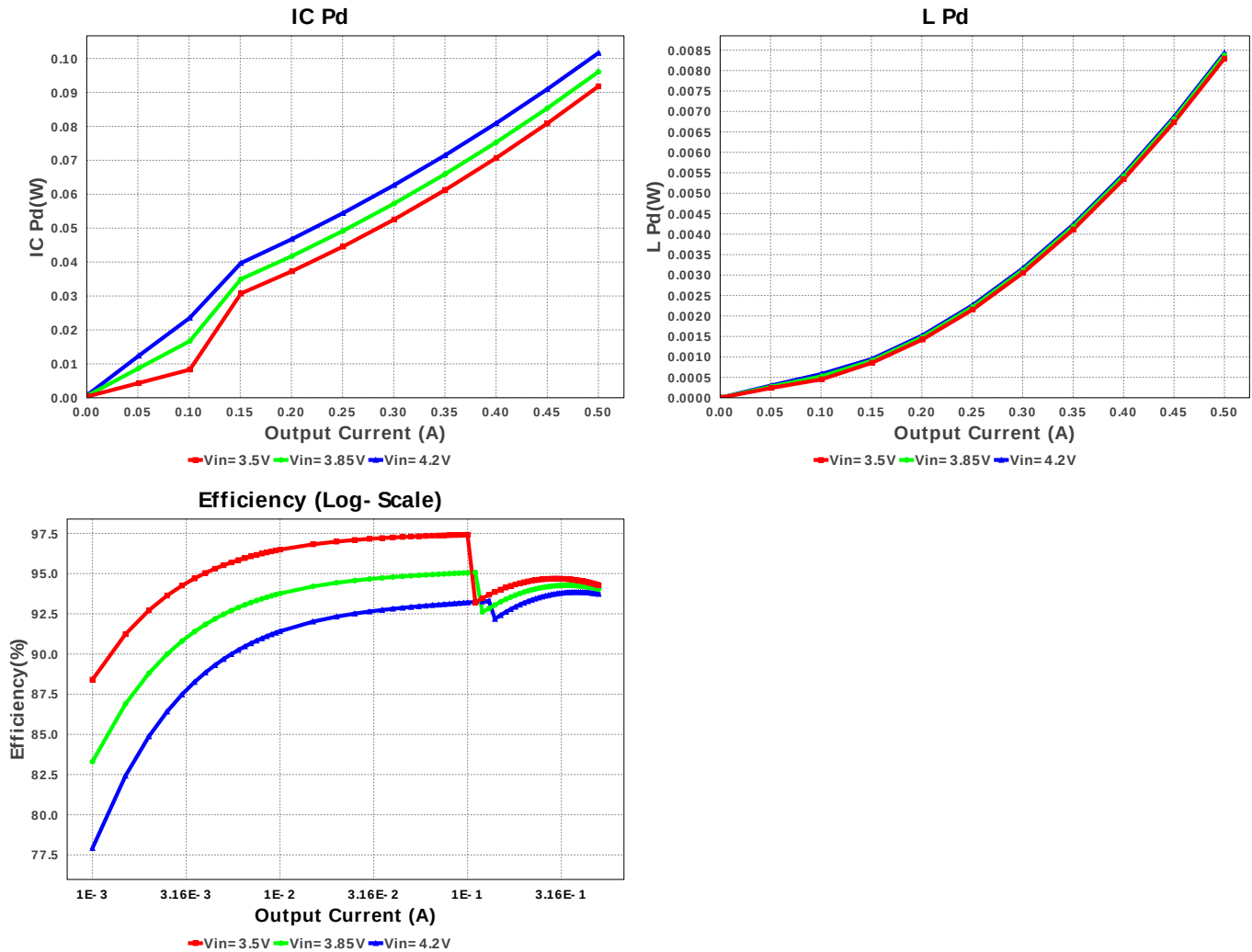


Electrical BOM

#	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	209.37 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	73.394 mA	Current	Output capacitor RMS ripple current
3.	Iin Avg	419.13 mA	Current	Average input current
4.	L Ipp	254.24 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	1.65 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	80.326 %	Op_point	Duty cycle
12.	Efficiency	93.733 %	Op_point	Steady state efficiency
13.	IC Tj	36.636 degC	Op_point	IC junction temperature
14.	ICThetaJA	65.3 degC/W	Op_point	IC junction-to-ambient thermal resistance
15.	IOUT_OP	500.0 mA	Op_point	Iout operating point
16.	VIN_OP	4.2 V	Op_point	Vin operating point
17.	Vout p-p	2.38 mV	Op_point	Peak-to-peak output ripple voltage
18.	Cin Pd	219.179 μW	Power	Input capacitor power dissipation
19.	Cout Pd	48.48 μW	Power	Output capacitor power dissipation
20.	IC Pd	101.619 mW	Power	IC power dissipation
21.	L Pd	8.428 mW	Power	Inductor power dissipation
22.	Total Pd	110.321 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	500.0 m	Maximum Output Current
2.	VinMax	4.2	Maximum input voltage
3.	VinMin	3.5	Minimum input voltage

#	Name	Value	Description
4.	Vout	3.3	Output Voltage
5.	base_pn	TPS62063	Base Product 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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