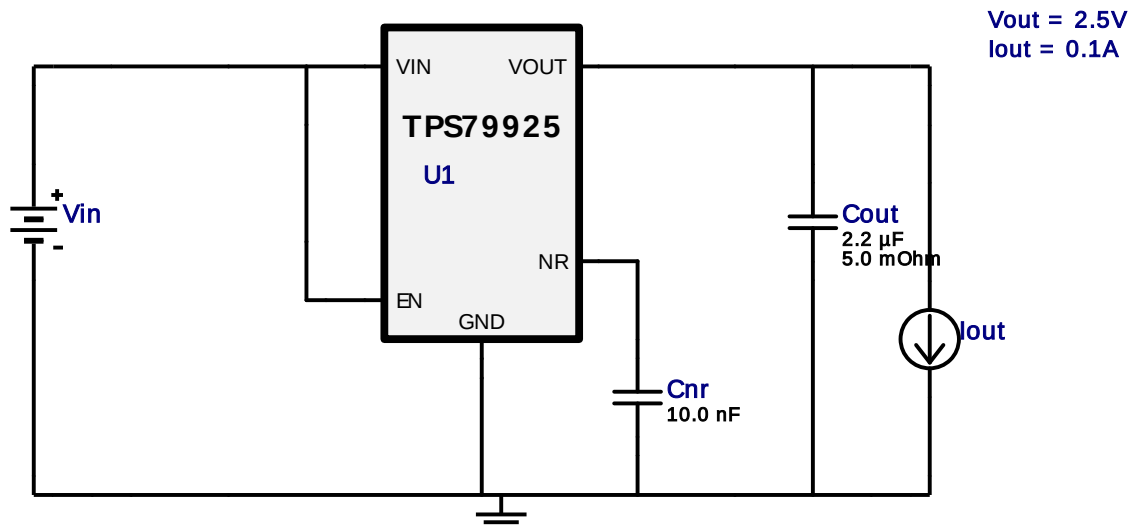


WEBENCH® Design Report

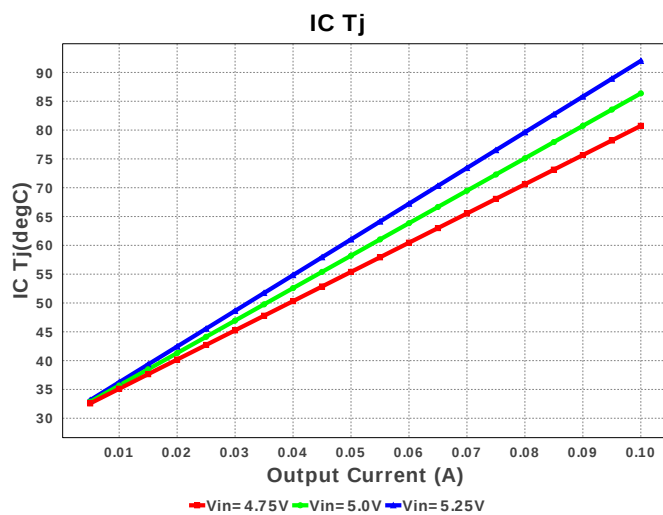
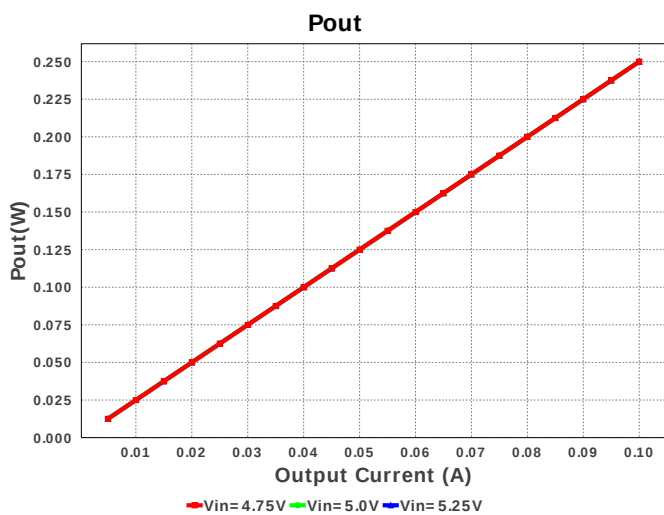
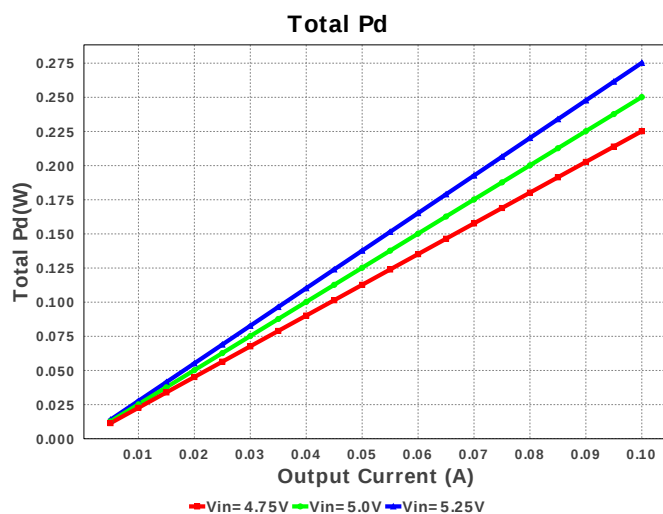
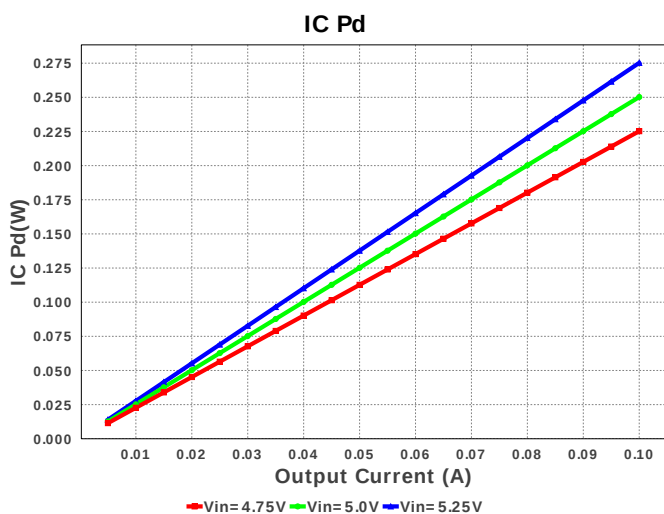
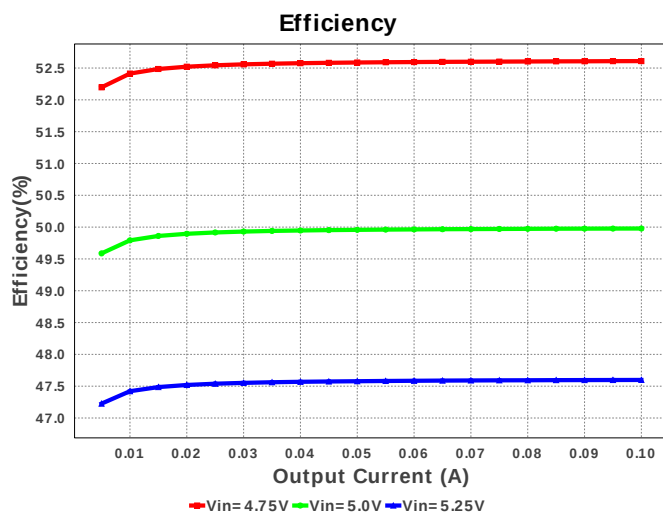
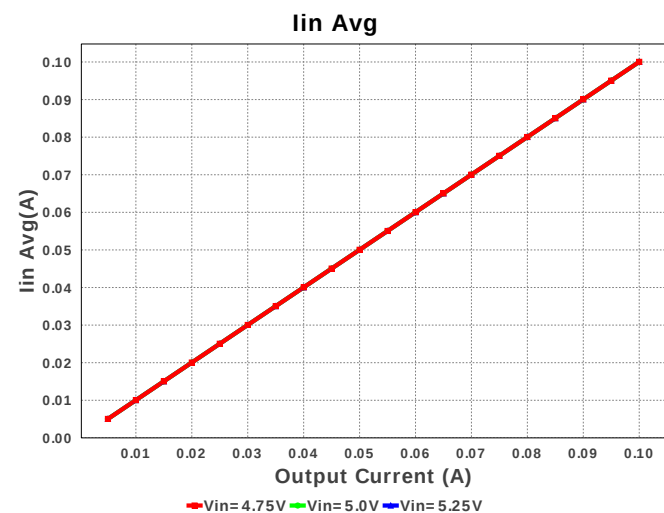
Design : 4737126/4 TPS79925DDCR
TPS79925DDCR 4.75V-5.25V to 2.50V @ 0.1A

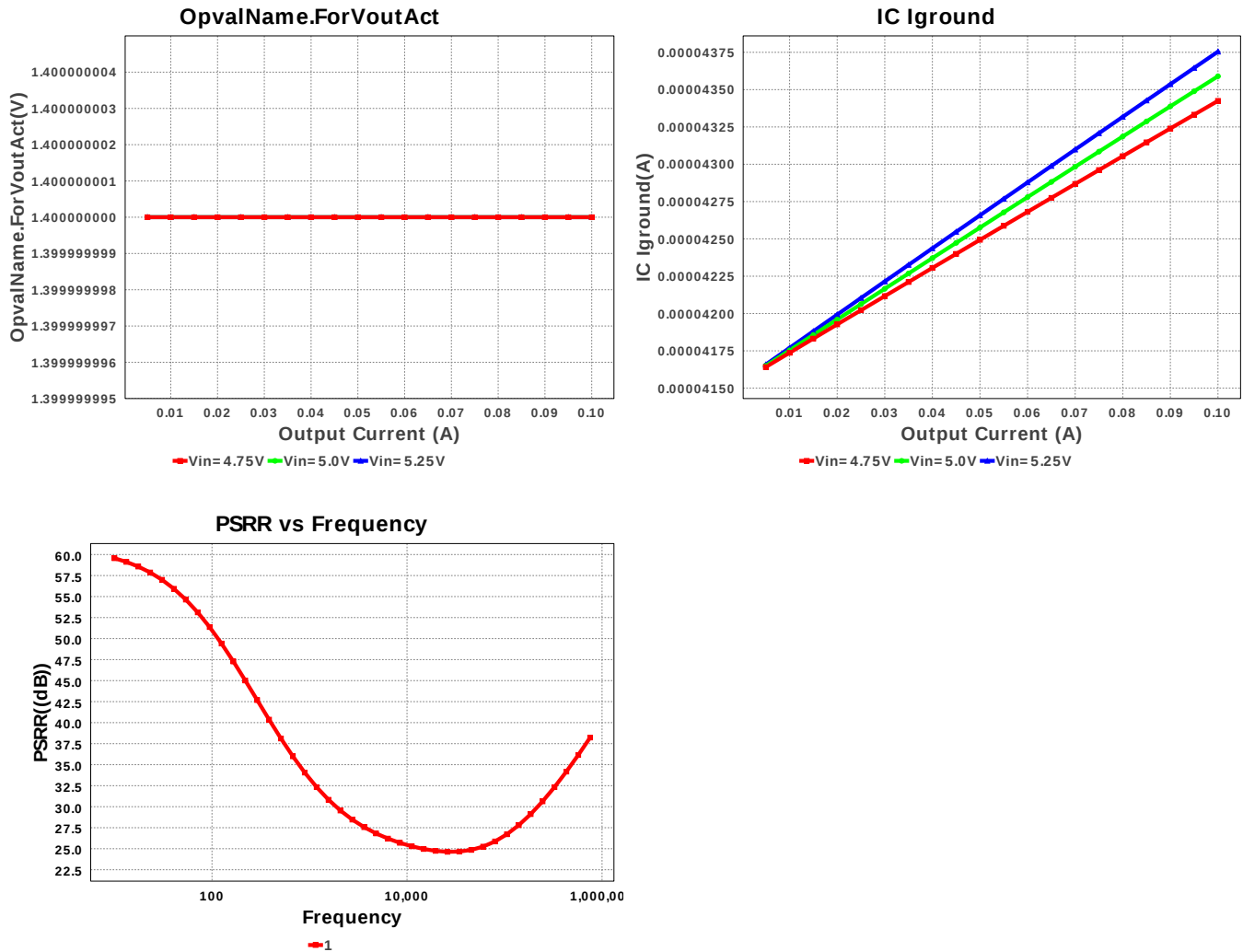


1. This regulator device is qualified for Automotive applications. All passives and other components selected in this design may not be qualified for Automotive applications. The user is required to verify that all components in the design meet the qualification and safety requirements for their specific application. View WEBENCH(R) Disclaimer.

Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cnr	MuRata	GRM033R60J103KA01D Series= X5R	Cap= 10.0 nF VDC= 6.3 V IRMS= 0.0 A	1	\$0.01	0201 2 mm ²
2.	Cout	MuRata	GRM155R60J225ME15D Series= X5R	Cap= 2.2 uF ESR= 5.0 mOhm VDC= 6.3 V IRMS= 3.67 A	1	\$0.02	0402 3 mm ²
3.	U1	Texas Instruments	TPS79925DDCR	Switcher	1	\$0.28	R-PDSO-G5 16 mm ²





Operating Values

#	Name	Value	Category	Description
1.	IC Igroud	43.754 μ A	Current	IC ground current
2.	Iin Avg	100.04 mA	Current	Average input current
3.	BOM Count	3	General	Total Design BOM count
4.	FootPrint	21.0 mm ²	General	Total Foot Print Area of BOM components
5.	IC Tolerance	50.0 mV	General	IC Feedback Tolerance
6.	Output Noise RMS	5.0 μ V	General	Noise RMS
7.	Pout	250.0 mW	General	Total output power
8.	Total BOM	\$0.31	General	Total BOM Cost
9.	Vin p-p	52.5 mV	Op_Point	Input Source ripple voltage
10.	Vout OP	2.5 V	Op_Point	Operational Output Voltage
11.	Efficiency	47.598 %	Op_point	Steady state efficiency
12.	IC Tj	92.009 degC	Op_point	IC junction temperature
13.	ICThetaJA	225.3 degC/W	Op_point	IC junction-to-ambient thermal resistance
14.	IOUT_OP	100.0 mA	Op_point	Iout operating point
15.	Input Ripple Frequency	100.0 kHz	Op_point	Input Source Ripple Frequency for PSRR Calculation
16.	PSRR est.	-26.531 dB	Op_point	Power Supply Rejection Ratio, estimated
17.	VIN_OP	5.25 V	Op_point	Vin operating point
18.	Vout p-p	2.475 mV	Op_point	Peak-to-peak output ripple voltage
19.	IC Pd	275.23 mW	Power	IC power dissipation
20.	Total Pd	275.23 mW	Power	Total Power Dissipation
21.	OpvalName.ForVoutAct	1.4 V		Achieved Vout with feedback resistor pair
22.	Vout Tolerance	2.0 %		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	100.0 m	Maximum Output Current
2.	VinMax	5.25	Maximum input voltage
3.	VinMin	4.75	Minimum input voltage
4.	Vout	2.5	Output Voltage

#	Name	Value	Description
5.	base_pn	TPS79925	Texas Instruments Base Part Number
6.	source	DC	Input Source Type
7.	ta	30.0	Ambient temperature

Design Assistance

1. TPS79925 Product Folder : <http://www.ti.com/product/tps799> : contains the data sheet and other resources.

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You should completely validate and test your design implementation to confirm the system functionality for your application prior to production.

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