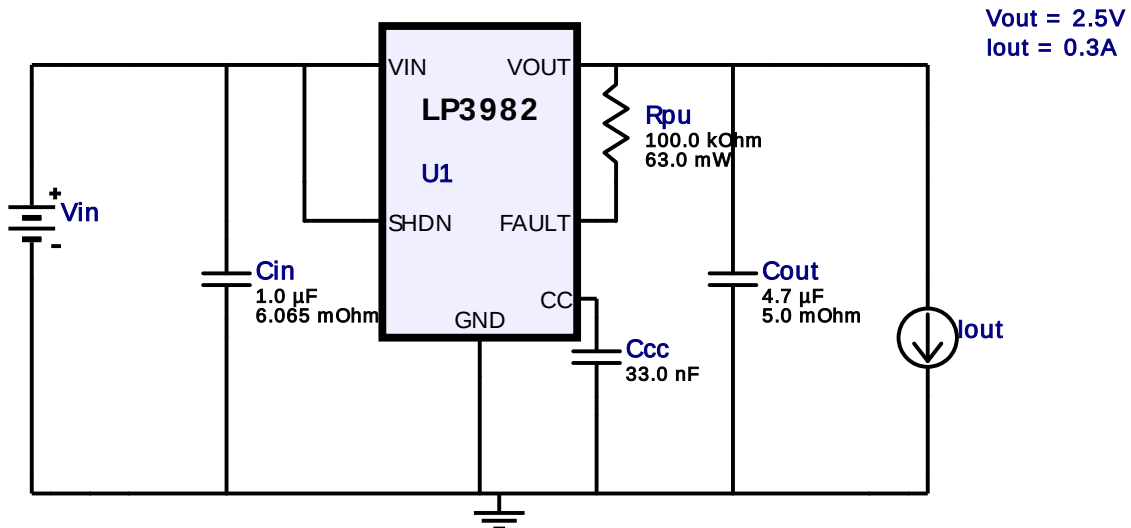


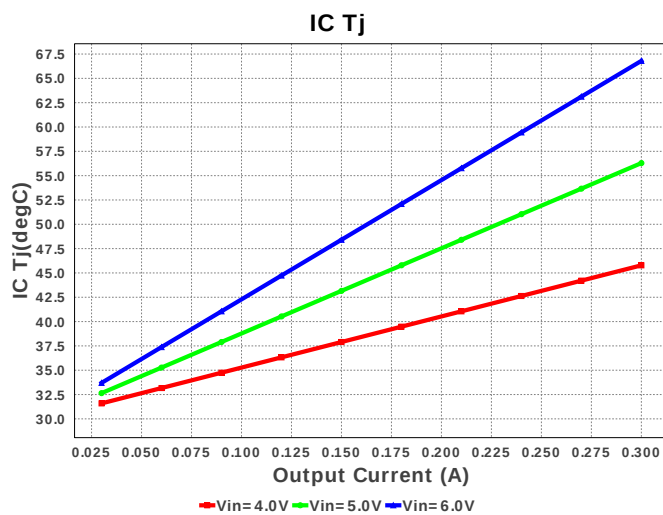
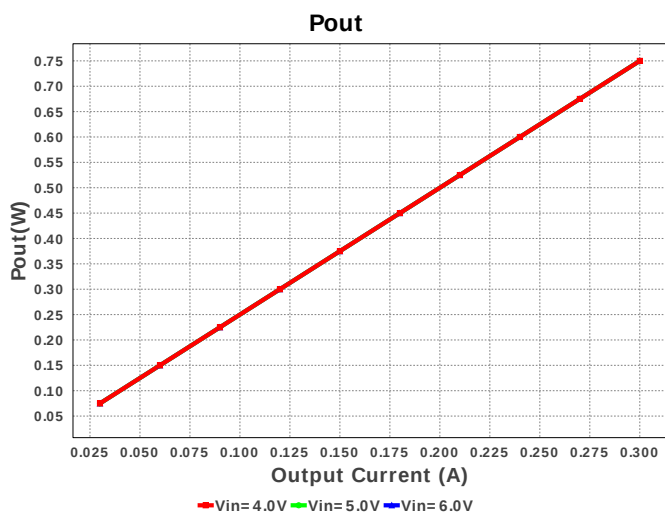
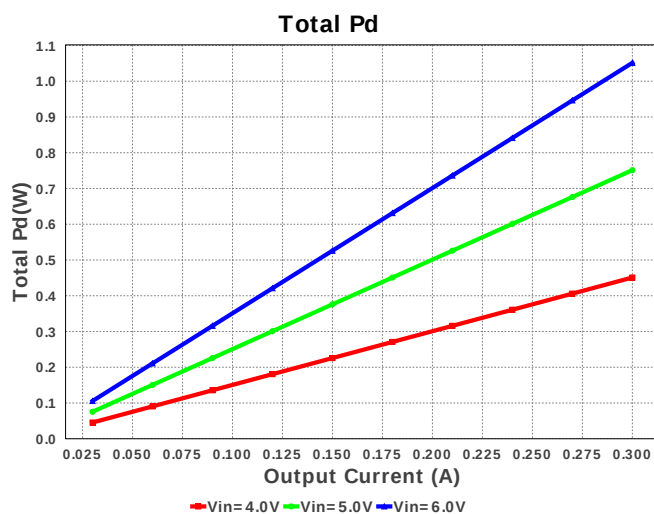
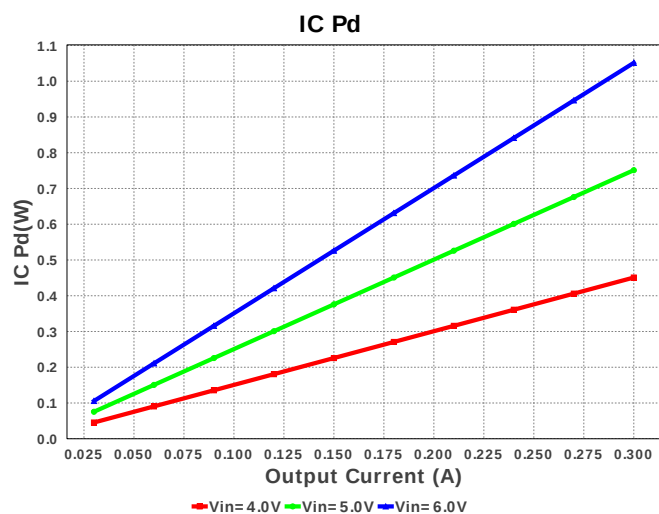
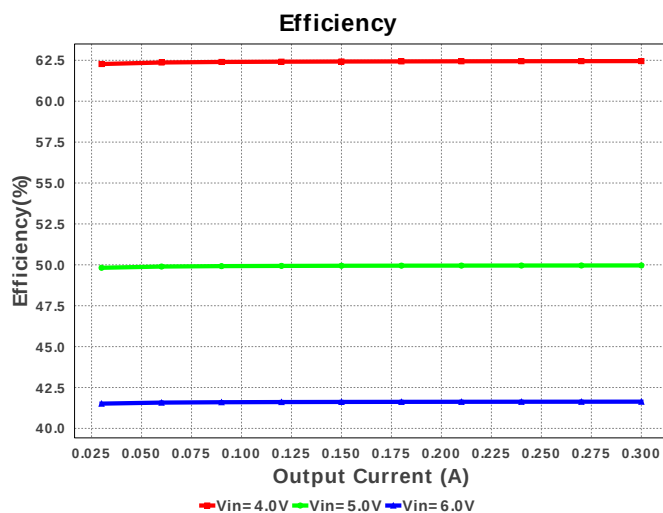
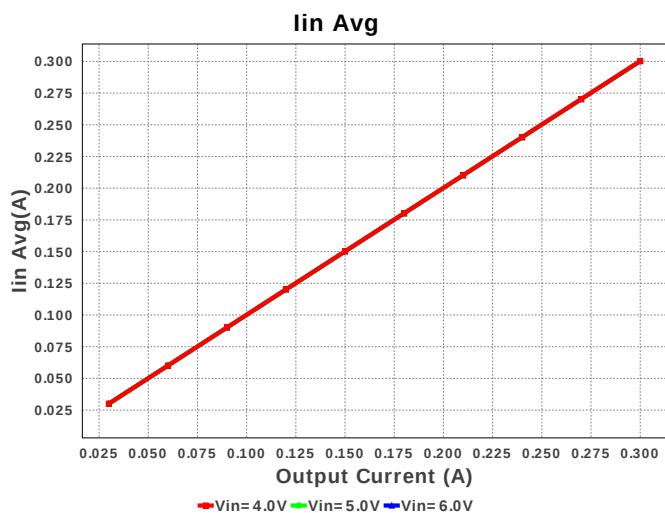
WEBENCH® Design Report

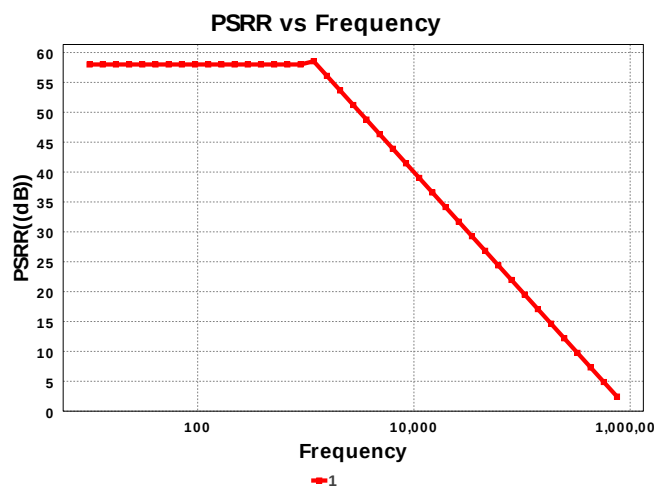
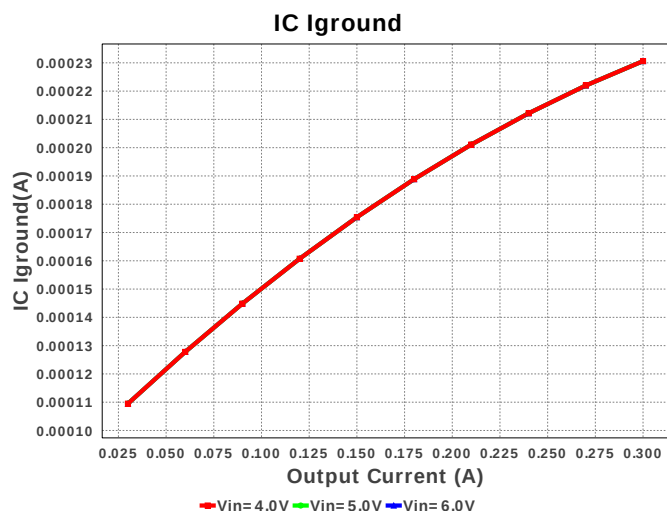
Design : 4769495/4 LP3982ILD-2.5/NOPB
LP3982ILD-2.5/NOPB 4.0V-6.0V to 2.50V @ 0.3A



Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Ccc	MuRata	GRM033R60J333KE01D Series= X5R	Cap= 33.0 nF VDC= 6.3 V IRMS= 0.0 A	1	\$0.01	0201 2 mm ²
2.	Cin	MuRata	GRM188R61A105KA61D Series= X5R	Cap= 1.0 uF ESR= 6.065 mOhm VDC= 10.0 V IRMS= 1.30675 A	1	\$0.01	0603 5 mm ²
3.	Cout	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
4.	Rpu	Vishay-Dale	CRCW0402100KFKED Series= CRCW..e3	Res= 100.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	0402 3 mm ²
5.	U1	Texas Instruments	LP3982ILD-2.5/NOPB	Switcher	1	\$0.20	SDA08C 14 mm ²





Operating Values

#	Name	Value	Category	Description
1.	IC Iground	230.61 μ A	Current	IC ground current
2.	Iin Avg	300.23 mA	Current	Average input current
3.	BOM Count	5	General	Total Design BOM count
4.	FootPrint	28.0 mm ²	General	Total Foot Print Area of BOM components
5.	IC Tolerance	75.0 mV	General	IC Feedback Tolerance
6.	Output Noise RMS	37.0 μ V	General	Noise RMS
7.	Pout	750.0 mW	General	Total output power
8.	Total BOM	\$0.24	General	Total BOM Cost
9.	Vin p-p	60.0 mV	Op_Point	Input Source ripple voltage
10.	Vout OP	2.5 V	Op_Point	Operational Output Voltage
11.	Efficiency	41.635 %	Op_point	Steady state efficiency
12.	IC Tj	66.798 degC	Op_point	IC junction temperature
13.	ICThetaJA	35.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
14.	IOUT_OP	300.0 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.	-20.0 dB	Op_point	Power Supply Rejection Ratio estimated
17.	VIN_OP	6.0 V	Op_point	Vin operating point
18.	Vout p-p	6.0 mV	Op_point	Peak-to-peak output ripple voltage
19.	IC Pd	1.051 W	Power	IC power dissipation
20.	Total Pd	1.051 W	Power	Total Power Dissipation
21.	Vout Tolerance	3.0 %		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	300.0 m	Maximum Output Current
2.	VinMax	6.0	Maximum input voltage
3.	VinMin	4.0	Minimum input voltage
4.	Vout	2.5	Output Voltage
5.	base_pn	LP3982	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

-
- LP3982** Product Folder : <http://www.ti.com/product/lp3982> : contains the data sheet and other resources.

Texas Instruments' WEBENCH simulation tools attempt to recreate the performance of a substantially equivalent physical implementation of the design. Simulations are created using Texas Instruments' published specifications as well as the published specifications of other device manufacturers. While Texas Instruments does update this information periodically, this information may not be current at the time the simulation is built. Texas Instruments does not warrant the accuracy or completeness of the specifications or any information contained therein. Texas Instruments does not warrant that any designs or recommended parts will meet the specifications you entered, will be suitable for your application or fit for any particular purpose, or will operate as shown in the simulation in a physical implementation. Texas Instruments does not warrant that the designs are production worthy.

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

Use of Texas Instruments' WEBENCH simulation tools is subject to [Texas Instruments' Site Terms and Conditions of Use](#). Prototype boards based on WEBENCH created designs are provided AS IS without warranty of any kind for evaluation and testing purposes and are subject to the terms of the [Evaluation License Agreement](#).