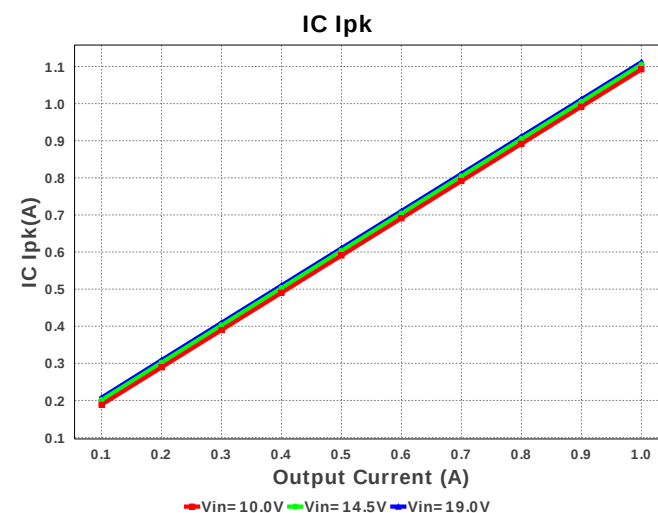
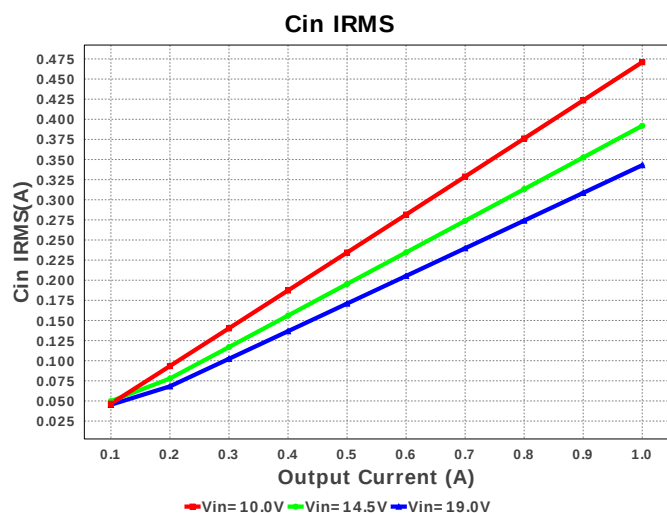
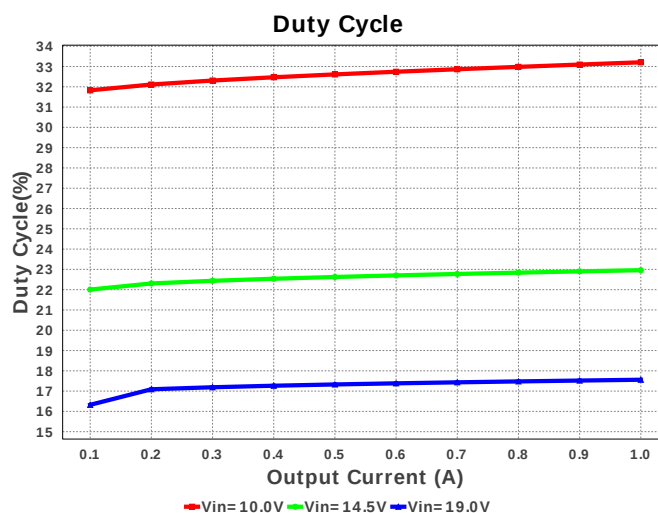
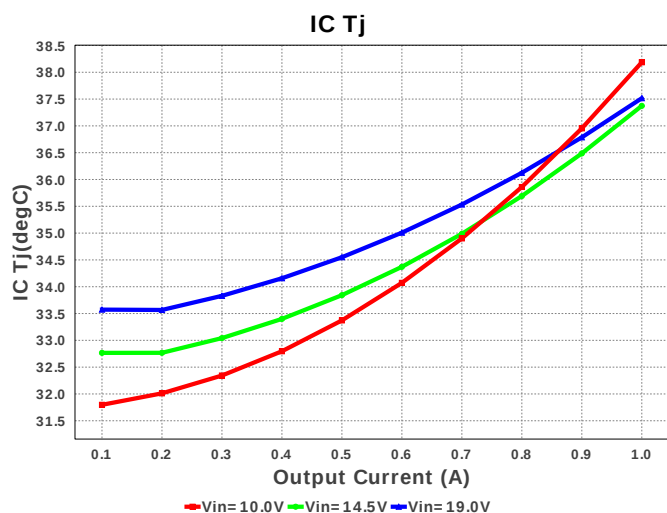
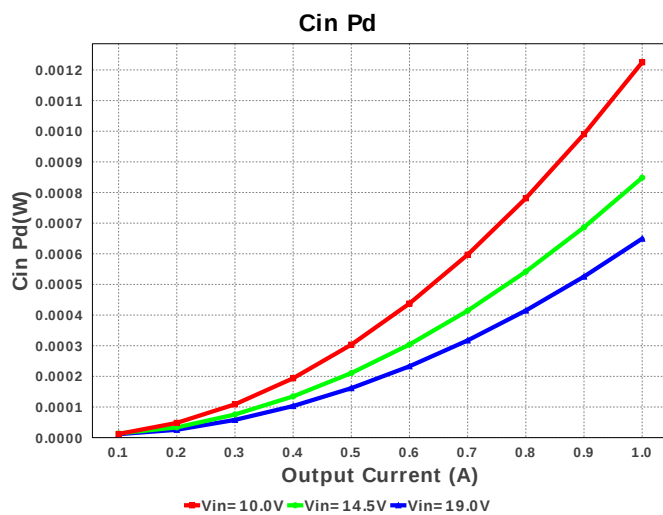
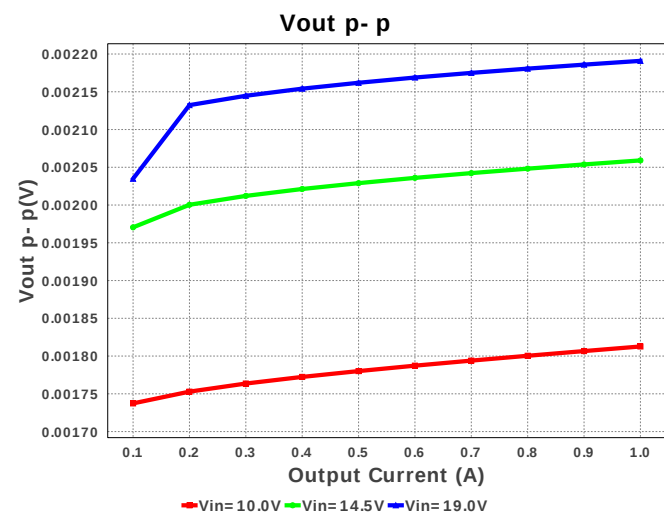
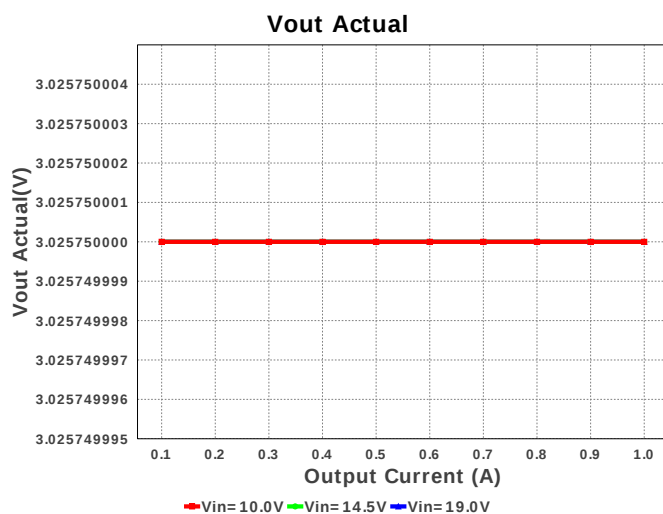
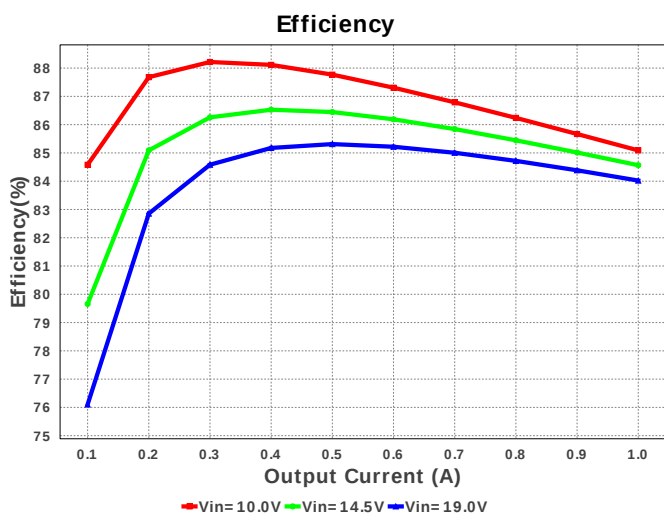
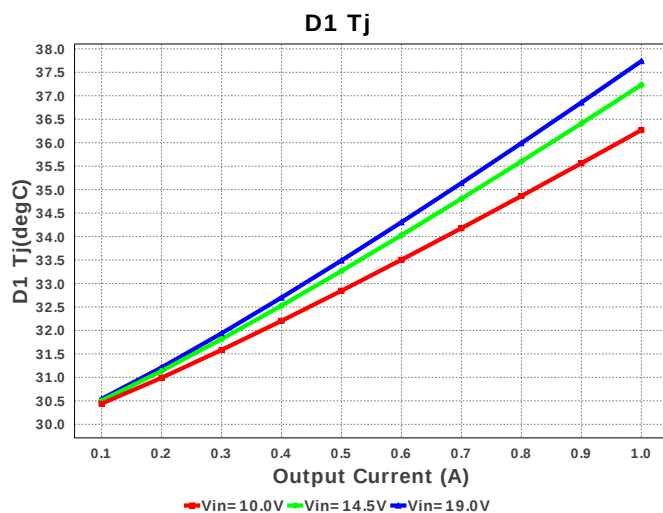
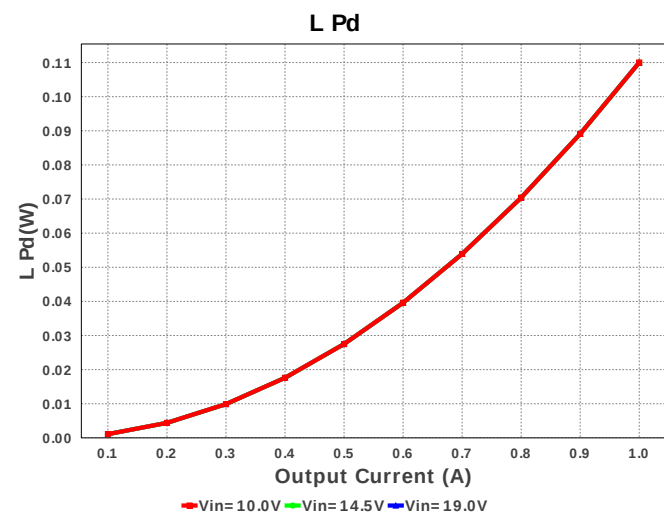


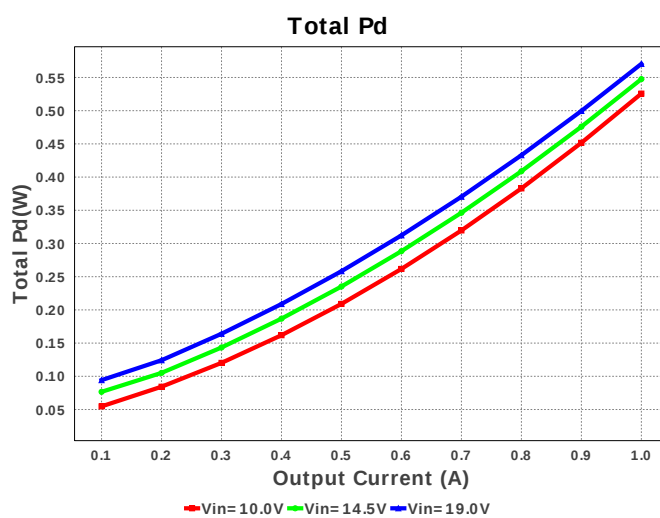
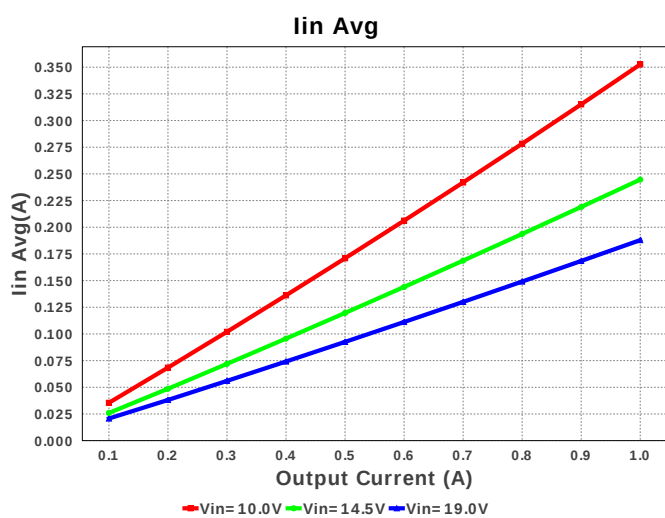
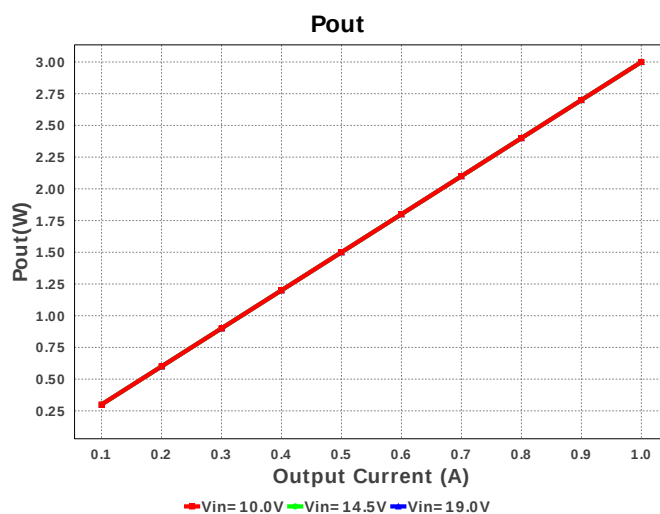
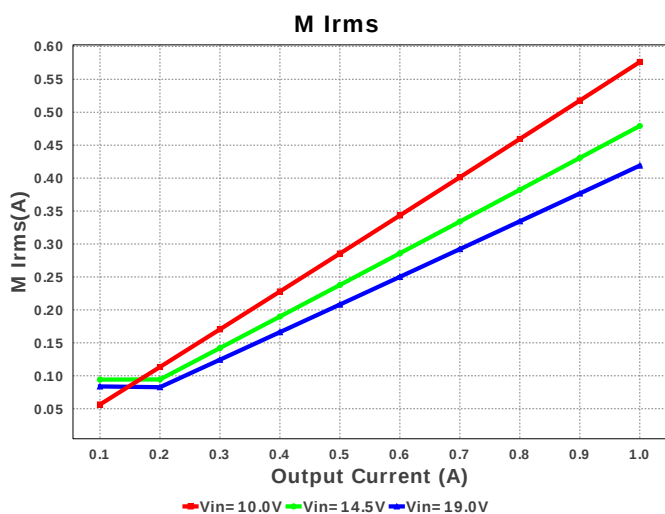
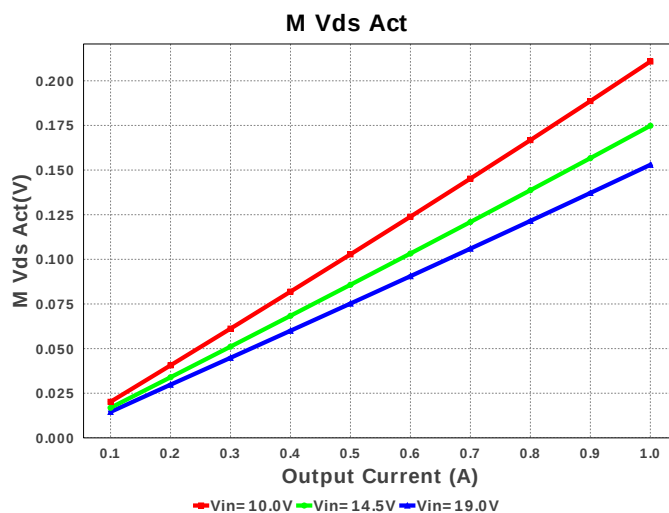
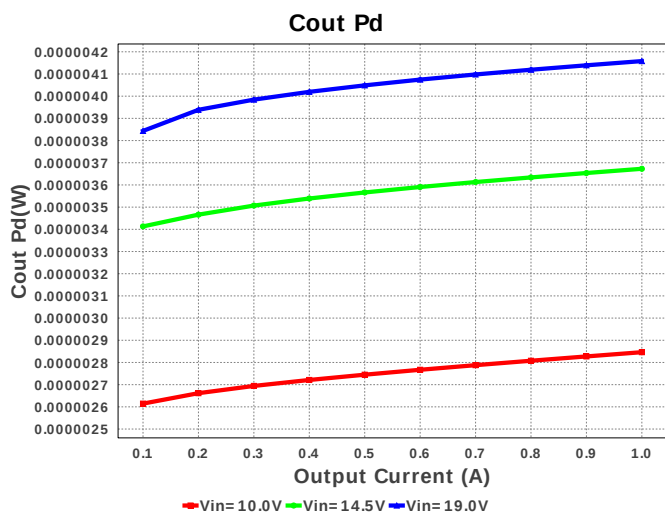


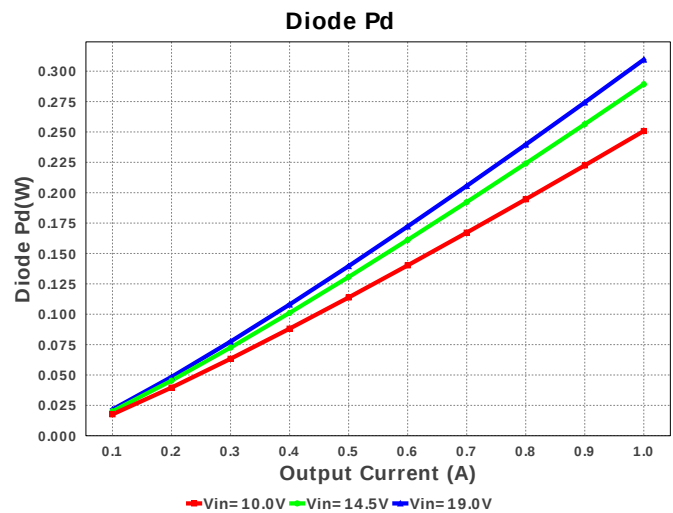
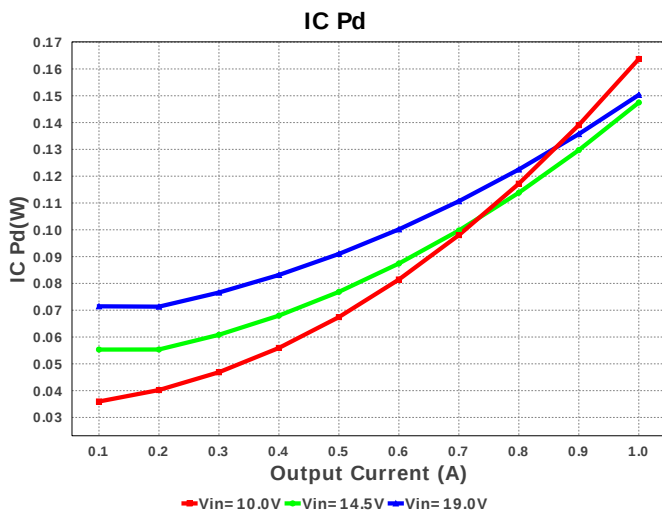
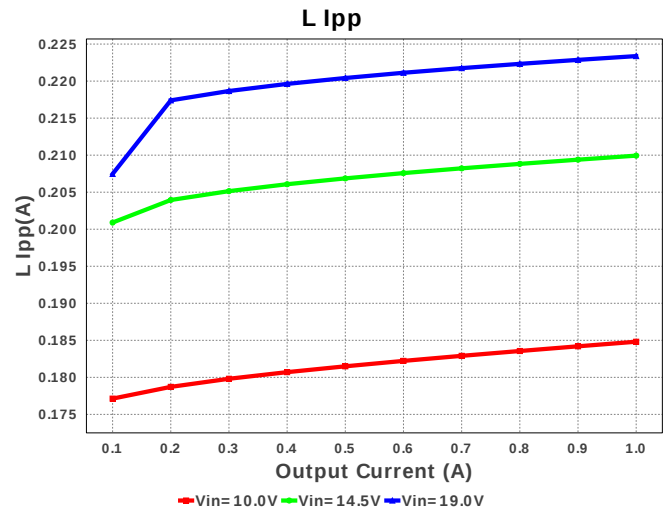
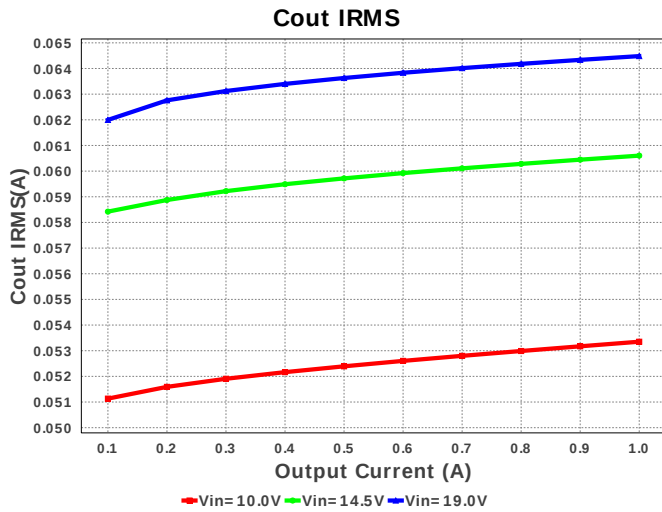
Device = LM25575MHX/NOPB
Topology = Buck
Created = 7/19/16 6:03:16 AM
BOM Cost = \$2.11
BOM Count = 16
Total Pd = 0.57W

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
10.	Rcomp	Panasonic	ERJ-6ENF1182V Series= ERJ-6E	Res= 11.8 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
11.	Rfb1	Panasonic	ERJ-6ENF1001V Series= ERJ-6E	Res= 1000.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
12.	Rfb2	Panasonic	ERJ-6ENF1471V Series= ERJ-6E	Res= 1.47 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
13.	Rt	Panasonic	ERJ-6ENF8661V Series= ERJ-6E	Res= 8.66 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
14.	U1	Texas Instruments	LM25575MHX/NOPB	Switcher	1	\$1.60	 MXA16A 59 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	342.953 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	64.483 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	1.111 A	Current	Peak switch current in IC
4.	Iin Avg	187.92 mA	Current	Average input current
5.	L Ipp	223.38 mA	Current	Peak-to-peak inductor ripple current
6.	M Irms	419.046 mA	Current	MOSFET RMS current
7.	BOM Count	16	General	Total Design BOM count
8.	FootPrint	276.0 mm ²	General	Total Foot Print Area of BOM components
9.	Frequency	571.723 kHz	General	Switching frequency
10.	IC Tolerance	18.0 mV	General	IC Feedback Tolerance
11.	M Vds Act	152.96 mV	General	Voltage drop across the MosFET
12.	Pout	3.0 W	General	Total output power
13.	Total BOM	\$2.11	General	Total BOM Cost
14.	D1 Tj	37.738 degC	Op_Point	D1 junction temperature
15.	Vout Actual	3.026 V	Op_Point	Vout Actual calculated based on selected voltage divider resistors
16.	Vout OP	3.0 V	Op_Point	Operational Output Voltage
17.	Duty Cycle	17.56 %	Op_point	Duty cycle
18.	Efficiency	84.022 %	Op_point	Steady state efficiency
19.	IC Tj	37.516 degC	Op_point	IC junction temperature
20.	ICThetaJA	50.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
21.	IOUT_OP	1.0 A	Op_point	Iout operating point
22.	VIN_OP	19.0 V	Op_point	Vin operating point
23.	Vout p-p	2.191 mV	Op_point	Peak-to-peak output ripple voltage
24.	Cin Pd	649.48 µW	Power	Input capacitor power dissipation
25.	Cout Pd	4.158 µW	Power	Output capacitor power dissipation
26.	Diode Pd	309.538 mW	Power	Diode power dissipation
27.	IC Pd	150.319 mW	Power	IC power dissipation
28.	L Pd	110.0 mW	Power	Inductor power dissipation
29.	Total Pd	570.491 mW	Power	Total Power Dissipation
30.	Vout Tolerance	2.689 %		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	19.0	Maximum input voltage
3.	VinMin	10.0	Minimum input voltage
4.	Vout	3.0	Output Voltage
5.	base_pn	LM25575	Texas Instruments Base Part Number
6.	source	DC	Input Source Type
7.	ta	30.0	Ambient temperature

Design Assistance

1. LM25575 Product Folder : <http://www.ti.com/product/LM25575> : 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](#).