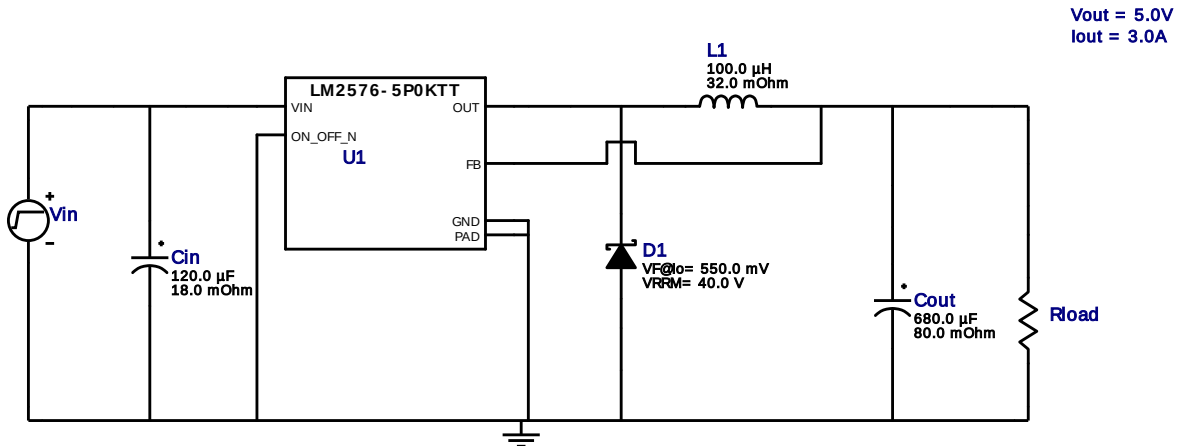


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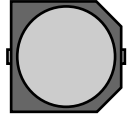
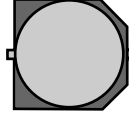
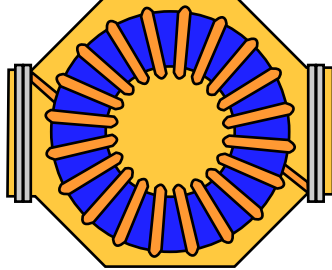
Design : 433359/297 LM2576SX-5.0/NOPB
LM2576SX-5.0/NOPB 23.0V-25.0V to 5.00V @ 3.0A

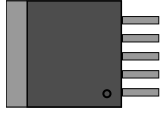


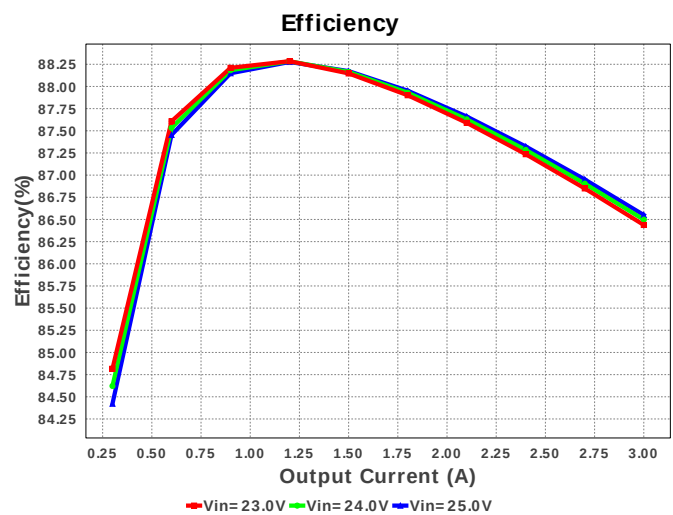
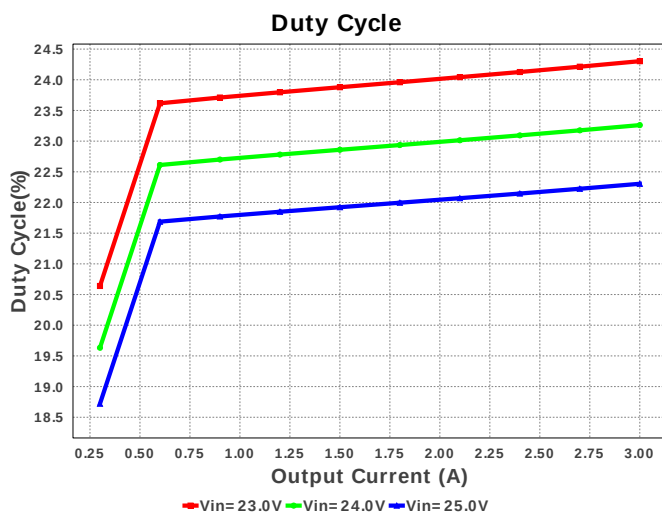
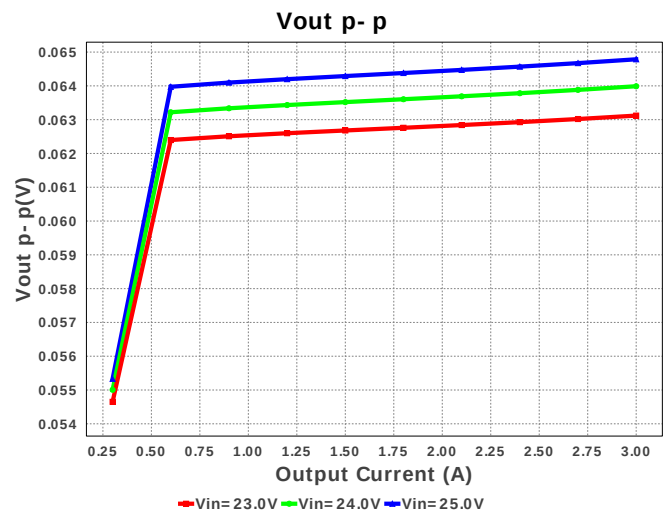
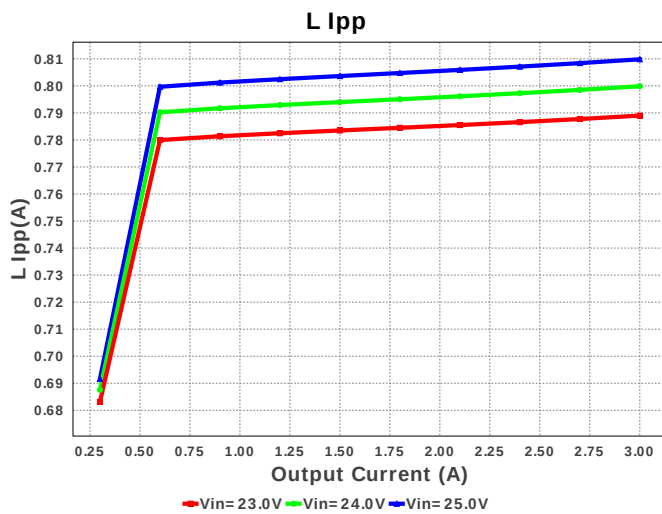
My Comments

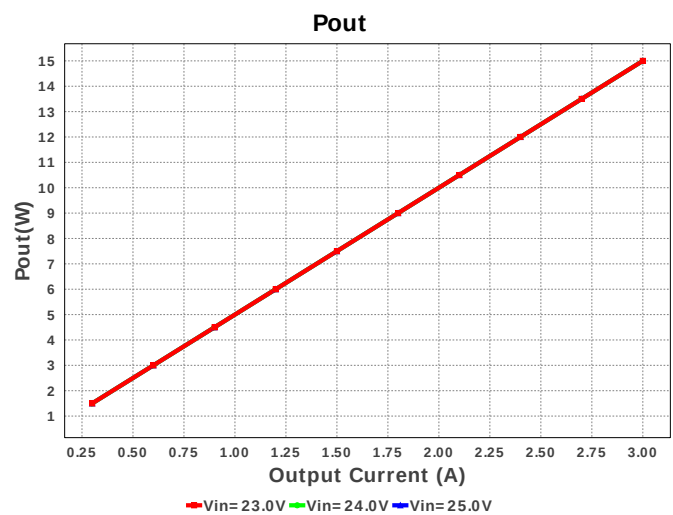
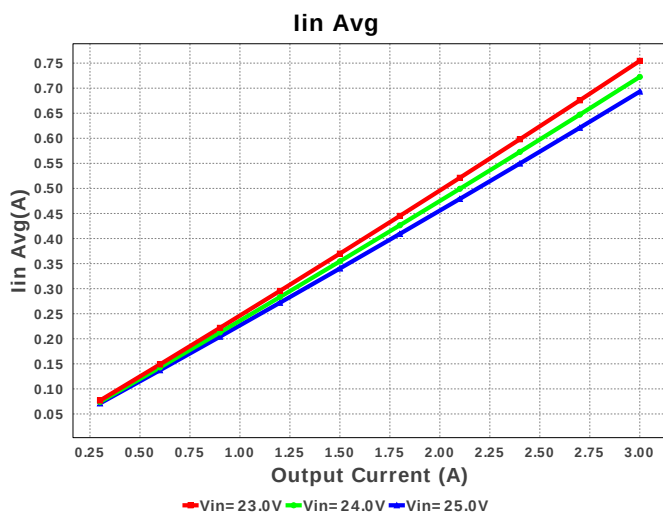
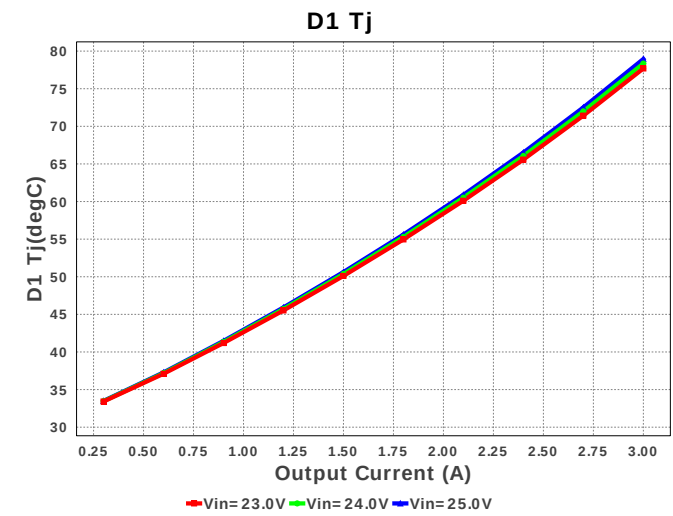
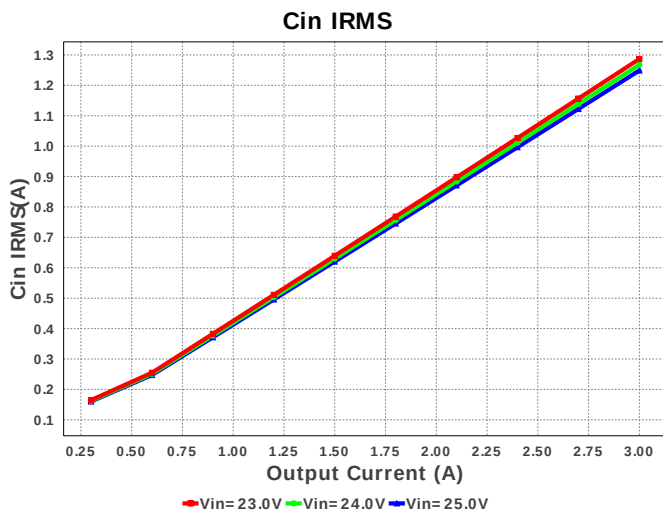
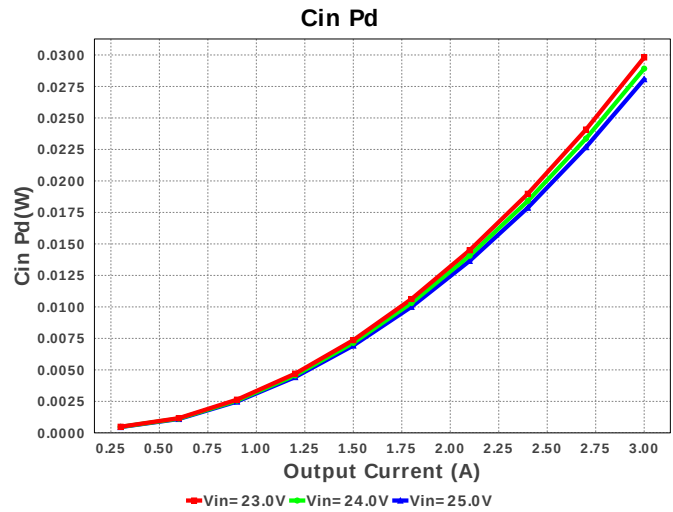
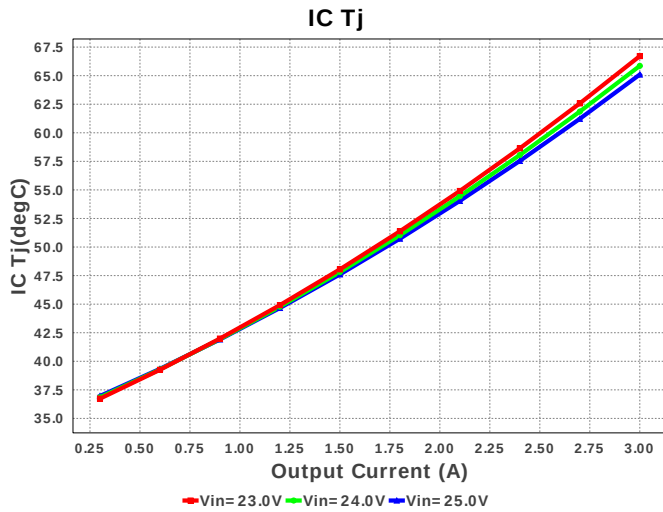
No comments

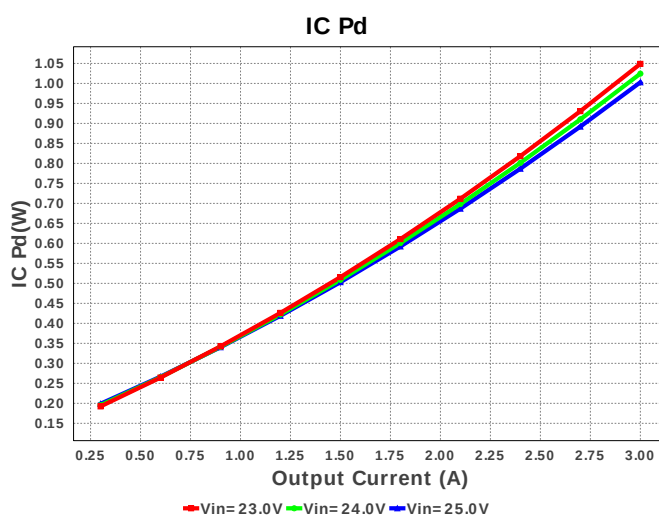
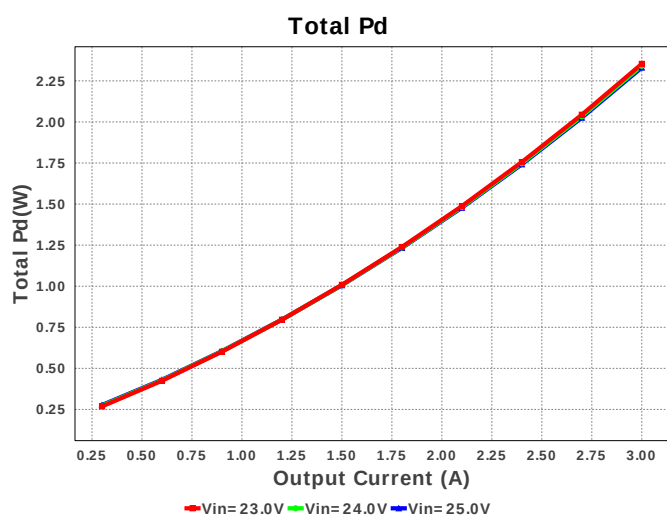
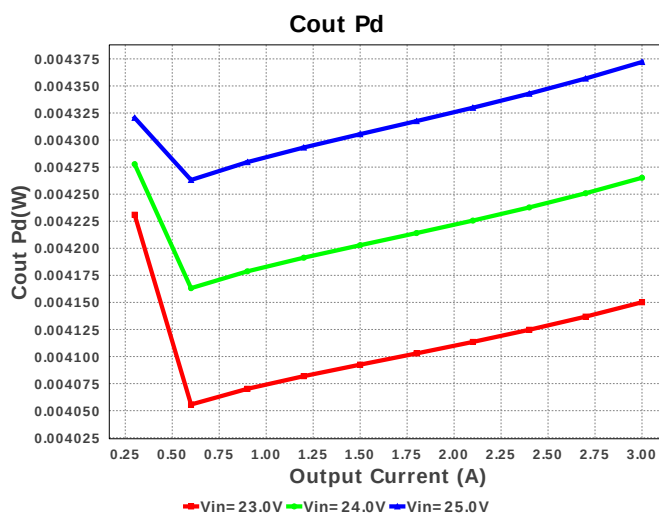
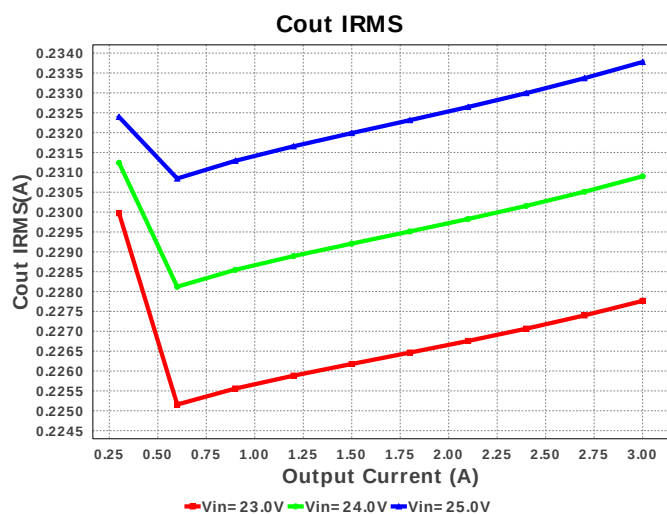
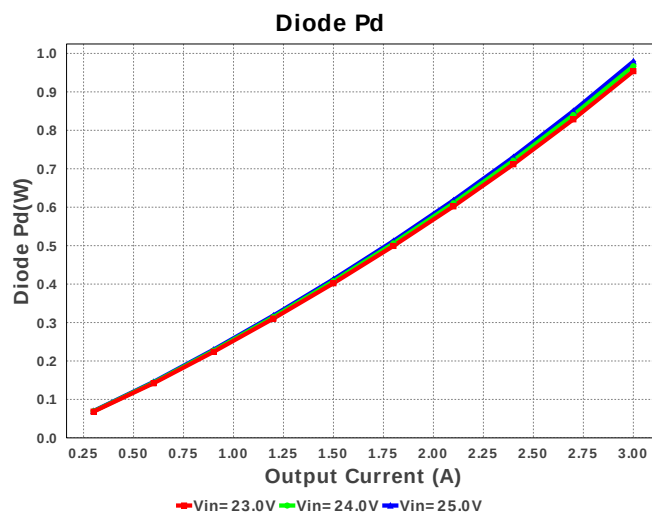
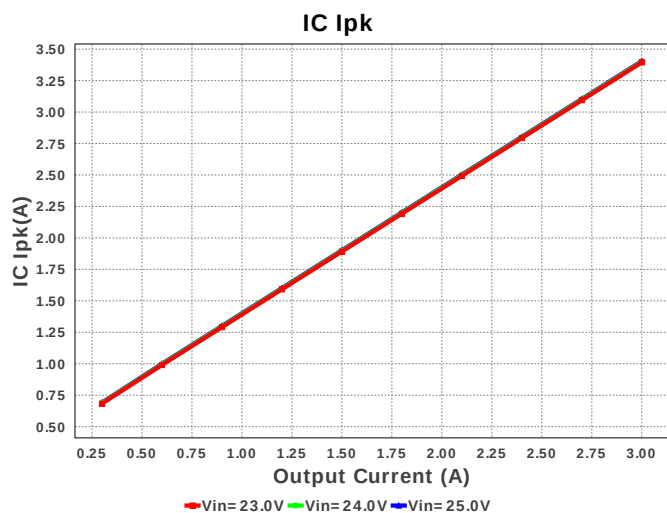
Electrical BOM

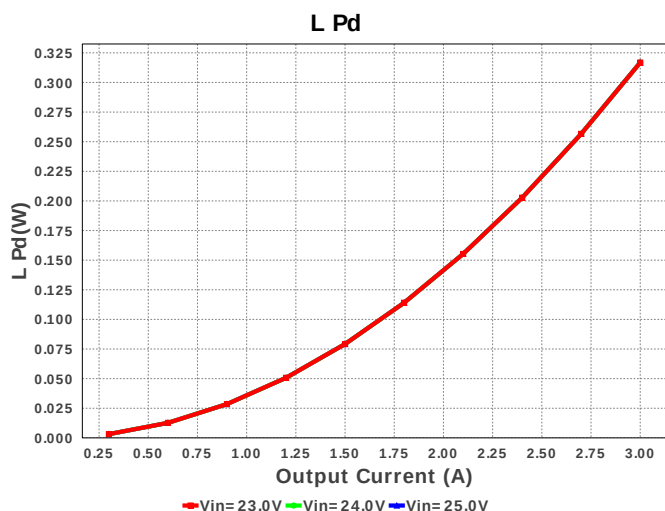
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cin	Panasonic	35VVPF120M Series= SVPF	Cap= 120.0 uF ESR= 18.0 mOhm VDC= 35.0 V IRMS= 4.4 A	1	\$0.74	 CAPSMT_62_F12 151 mm²
2.	Cout	Panasonic	EEE-FK1C681P Series= FK	Cap= 680.0 uF ESR= 80.0 mOhm VDC= 16.0 V IRMS= 850.0 mA	1	\$0.24	 SM_RADIAL_G 172 mm²
3.	D1	Diodes Inc.	B540C-13-F	VF@Io= 550.0 mV VRRM= 40.0 V	1	\$0.19	 SMC 83 mm²
4.	L1	Bourns	PM2110-101K-RC	L= 100.0 µH DCR= 32.0 mOhm	1	\$1.21	 PM2110 890 mm²

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
5.	U1	Texas Instruments	LM2576SX-5.0/NOPB	Switcher	1	\$1.19	 KTT0005B 198 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	1.249 A	Current	Input capacitor RMS ripple current
2.	Cout IRMS	233.777 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	3.405 A	Current	Peak switch current in IC
4.	Iin Avg	693.24 mA	Current	Average input current
5.	L Ipp	809.83 mA	Current	Peak-to-peak inductor ripple current
6.	BOM Count	5	General	Total Design BOM count
7.	FootPrint	1.495 k mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	52.0 kHz	General	Switching frequency
9.	IC Tolerance	13.0 mV	General	IC Feedback Tolerance
10.	Mode	CCM	General	Conduction Mode
11.	Pout	15.0 W	General	Total output power
12.	Total BOM	\$3.57	General	Total BOM Cost
13.	D1 Tj	78.952 degC	Op_Point	D1 junction temperature
14.	Vout OP	5.0 V	Op_Point	Operational Output Voltage
15.	Duty Cycle	22.305 %	Op_point	Duty cycle
16.	Efficiency	86.55 %	Op_point	Steady state efficiency
17.	IC Tj	65.098 degC	Op_point	IC junction temperature
18.	ICThetaJA	35.0 degC/W	Op_point	IC junction-to-ambient thermal resistance
19.	IOUT_OP	3.0 A	Op_point	Iout operating point
20.	VIN_OP	25.0 V	Op_point	Vin operating point
21.	Vout p-p	64.786 mV	Op_point	Peak-to-peak output ripple voltage
22.	Cin Pd	28.074 mW	Power	Input capacitor power dissipation
23.	Cout Pd	4.372 mW	Power	Output capacitor power dissipation
24.	Diode Pd	979.045 mW	Power	Diode power dissipation
25.	IC Pd	1.003 W	Power	IC power dissipation
26.	L Pd	316.8 mW	Power	Inductor power dissipation
27.	Total Pd	2.331 W	Power	Total Power Dissipation
28.	Vout Tolerance	260.0 m%		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	3.0	Maximum Output Current
2.	VinMax	25.0	Maximum input voltage
3.	VinMin	23.0	Minimum input voltage
4.	Vout	5.0	Output Voltage
5.	base_pn	LM2576	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature

Design Assistance

1. **LM2576** Product Folder : <http://www.ti.com/product/LM2576> : contains the data sheet and other resources.

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