

WEBENCH[®] Thermal Simulation Report

Design : 4530725/56 TPS54232DR
Leawood R2 TPS54232DR 6.0V-18.0V to 5.00V @ 2.0A

Operating Condition

Name	Value
VIN_OP	18.0V
IOUT_OP	2.0A

Ambient Temperature

Name	Temperature
Ambient_plus_Z	30.0
Ambient_minus_Z	30.0

Air Flow

Name	Direction
Flow_Type	Convection
Flow_Rate	0.0LFM
Flow_Direction	Top to Bottom





Edge Temperature




Name	Temperature	Thermal Type
Edge_plus_X (Right)		Insulated
Edge_minus_X (Left)		Insulated
Edge_plus_Y (Top)		Insulated
Edge_minus_Y (Bottom)		Insulated

My Comments

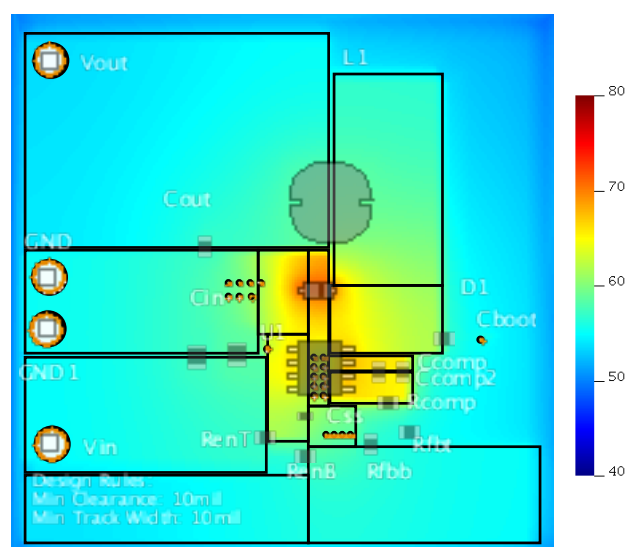
No comments

BOM

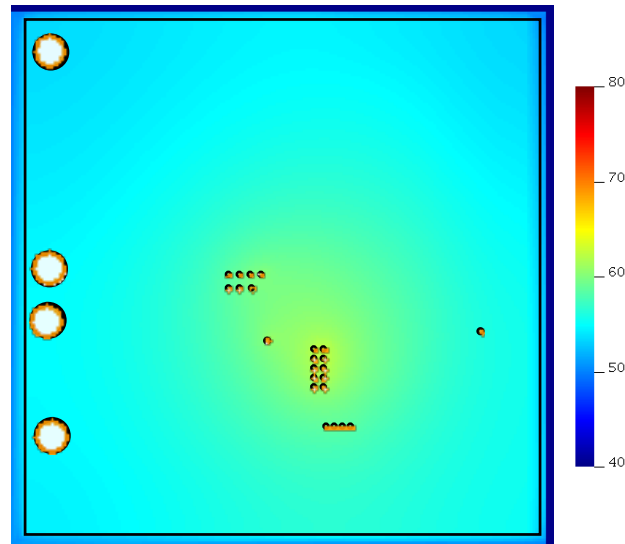
Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
pcb_bottom		62°C						
L1	SDR0805-6R8ML	59°C	0.176W	Bourns	L=6.8E-6H DCR=0.04Ohm	1	\$0.23	 SDR0805 96.04 mm ²
Cin	GRM32ER61E226KE15L	59°C	0.00W	MuRata	VDC=25.0V ESR=0.002Ohm IRMS=3.67A Cap=2.2E-5F	2	\$0.18	 1210 14.7 mm ²
Cout	C2012X5R1A476M125AC	57°C	0.00W	TDK	Cap=4.7E-5F ESR=0.00294Ohm IRMS=3.80451A VDC=10.0V	1	\$0.29	 0805 6.75 mm ²

Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
U1	TPS54232DR	107°C	0.662W	Texas Instruments		1	\$0.55	
D1	SS24FL	0°C	0.768W	Fairchild Semiconductor	VRRM=40.0V VFatlo=0.55V	1	\$0.07	D0008A 56.58 mm ²  SOD-123F 11.7 mm ²
pcb_top		71°C						

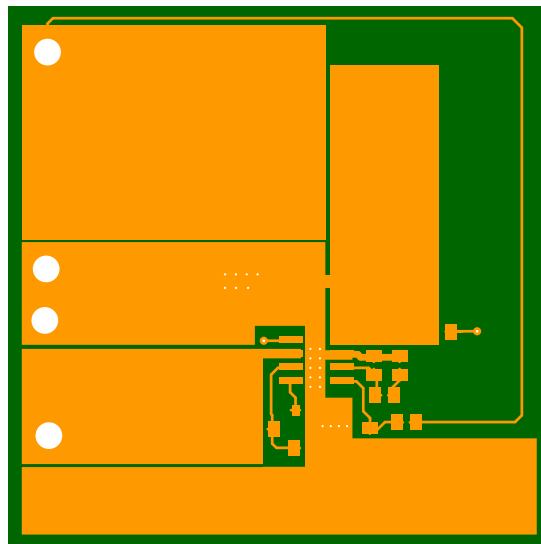
Thermal Images



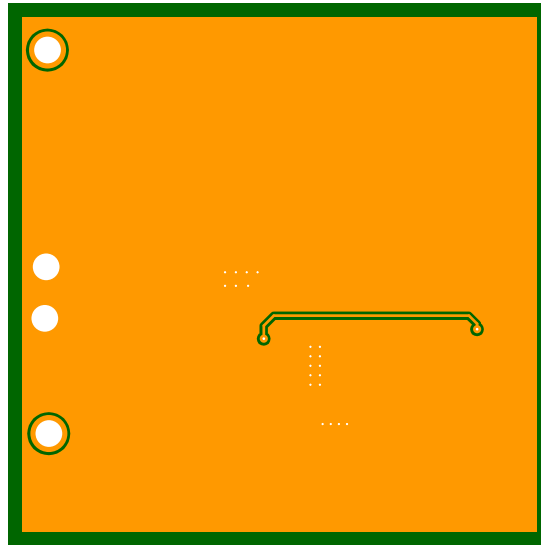
Thermal Top Image



Thermal Bottom Image

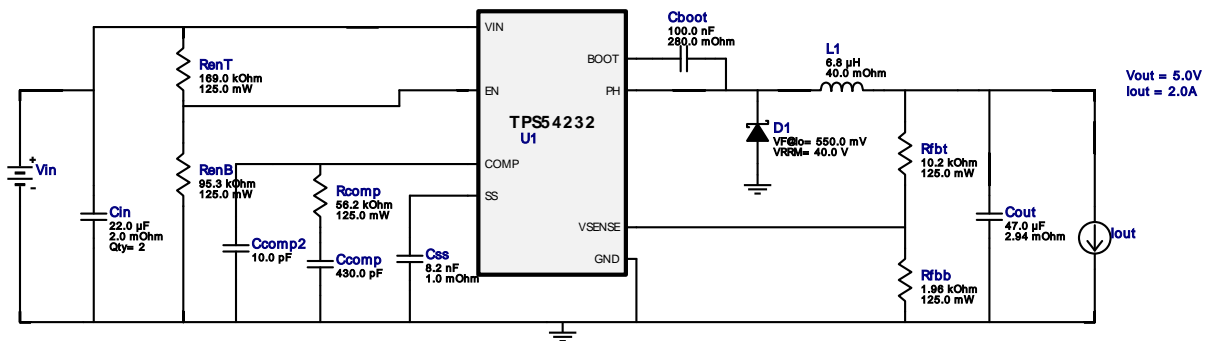


PCB Top Image



PCB Bottom Image

Schematic



Design Assistance

1. **TPS54232** Product Folder : <http://www.ti.com/product/TPS54232> : contains the data sheet and other resources.

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