

## WEBENCH<sup>®</sup> Thermal Simulation Report

Design : 4530725/56 TPS54232DR  
Leaewood 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

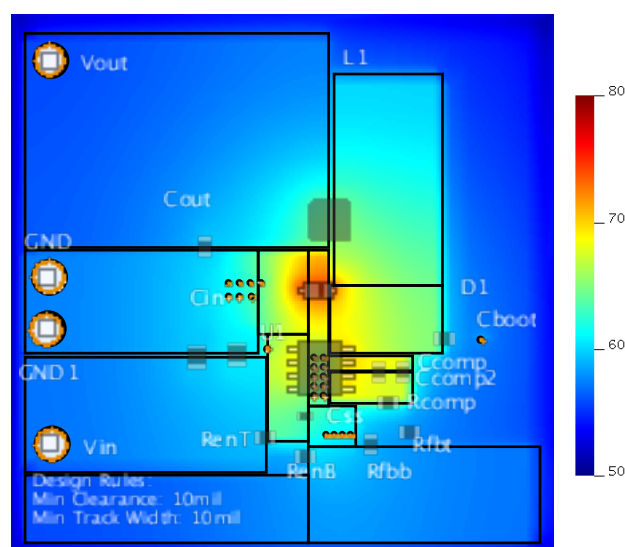
No comments

### BOM

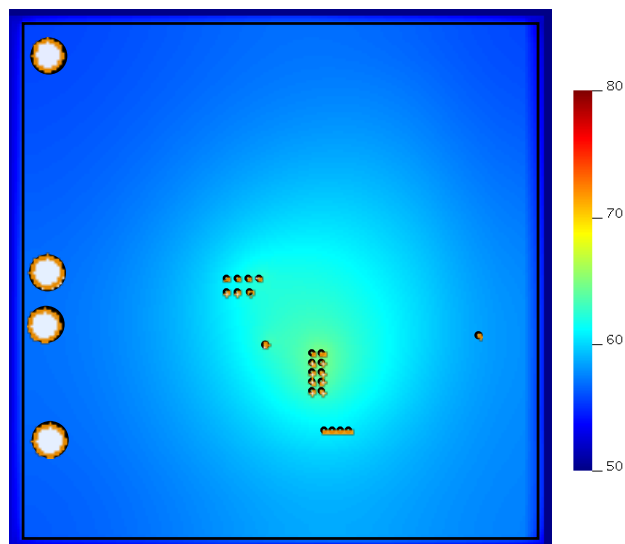
Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
pcb_bottom		65°C						
L1	XAL4030-682MEB	66°C	0.297W	Coilcraft	L=6.8E-6H DCR=0.0674Ohm	1	\$0.72	 XAL4030 25.0 mm <sup>2</sup>
Cin	GRM32ER61E226KE15L	61°C	0.00W	MuRata	VDC=25.0V ESR=0.002Ohm IRMS=3.67A Cap=2.2E-5F	2	\$0.18	 1210 14.7 mm <sup>2</sup>
Cout	C2012X5R1A476M125AC	60°C	0.00W	TDK	Cap=4.7E-5F ESR=0.00294Ohm IRMS=3.80451A VDC=10.0V	1	\$0.29	 0805 6.75 mm <sup>2</sup>

Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
U1	TPS54232DR	109°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 <sup>2</sup>  SOD-123F 11.7 mm <sup>2</sup>
pcb_top		74°C						

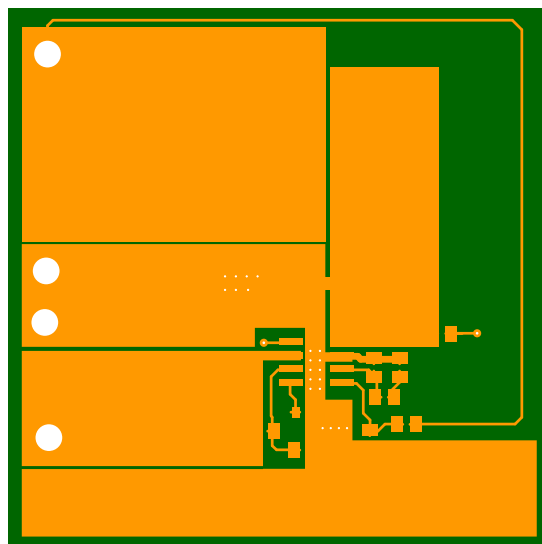
## Thermal Images



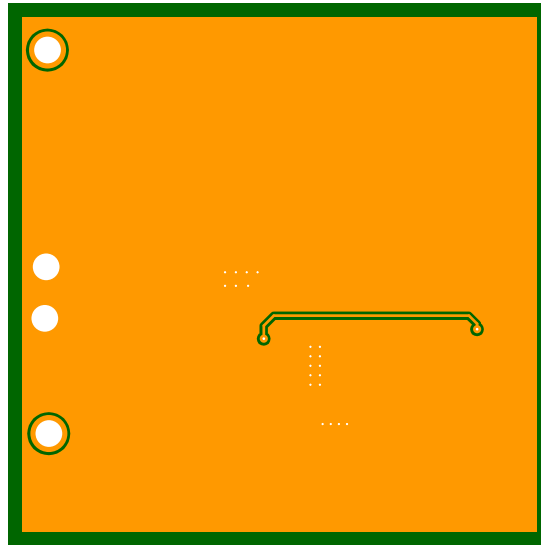
Thermal Top Image



Thermal Bottom Image

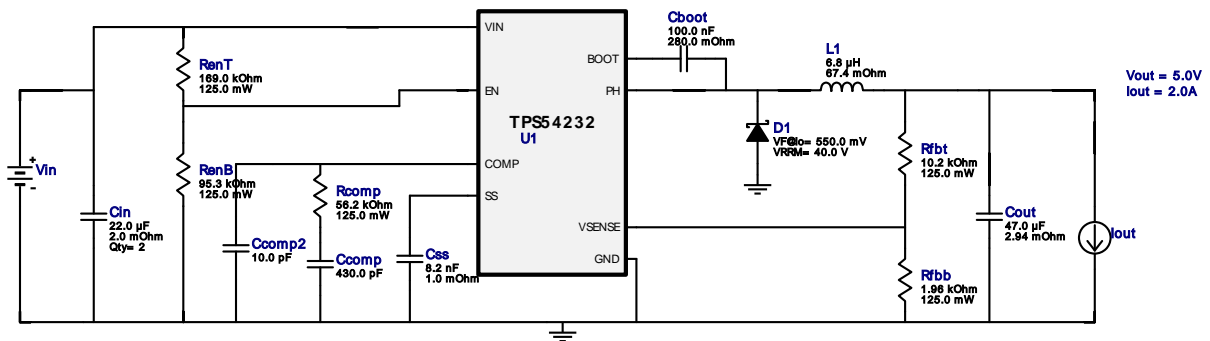


PCB Top Image



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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