VinMin = 10.0V
VinMax = 17.5V
Vout = 25.2V
Iout = 4.0A

Device = TPS43060RTER
Topology = Boost
Created = 9/18/16 11:09:12 PM
BOM Cost = $5.53
Total Pd = 5.29W
Footprint = 666.0 mm^2
BOM Count = 26
tSim Id = 1

WEBENCH® Thermal Simulation Report

Design : 3943919/57 TPS43060RTER
TPS43060RTER 10.0V-17.5V to 25.20V @ 4.0A

Operating Condition

Name	Value
VIN_OP	10.0V
IOUT_OP	4.0A

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

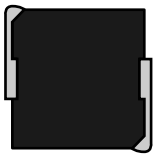
Name	Temperature	Thermal Type
Edge_plus_X (Right)		Insulated
Edge_minus_X (Left)		Insulated
Edge_plus_Y (Top)		Insulated
Edge_minus_Y (Bottom)		Insulated

My Comments

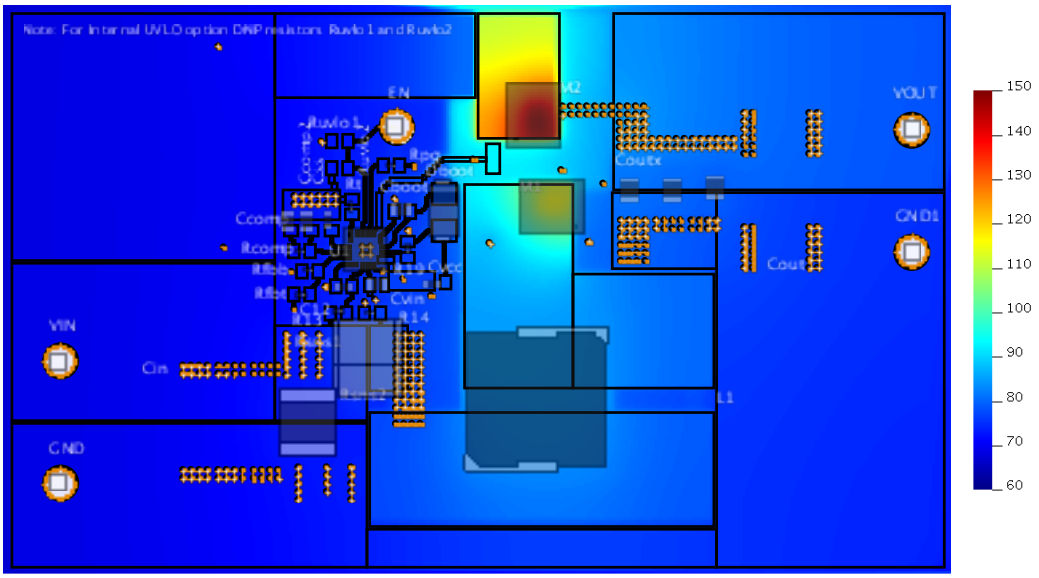
No comments

BOM

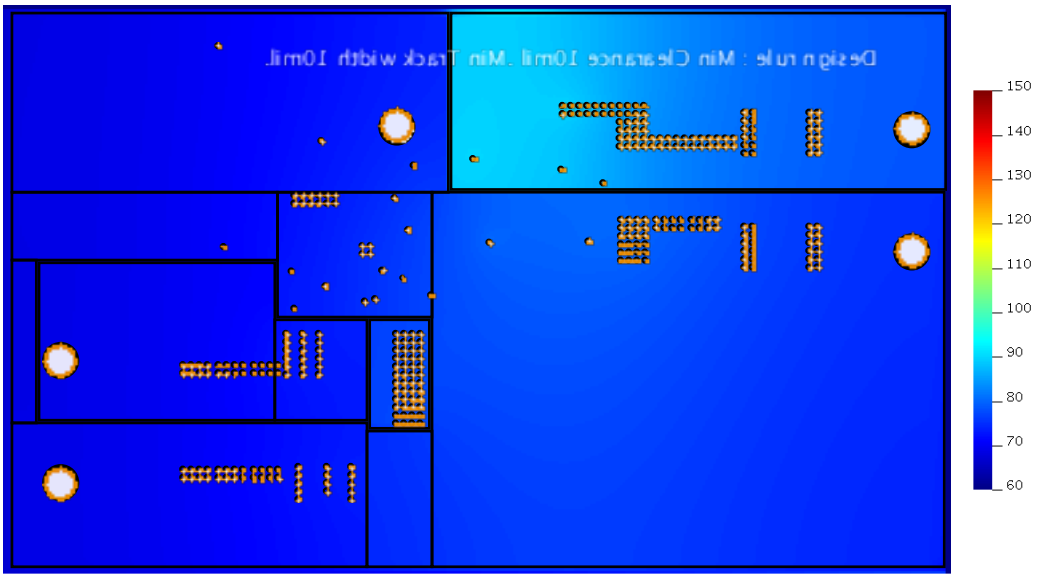
Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
Rsns1	PMR100HZPFU8L00	77°C	0.218W	Rohm		1	$0.16	 2512 43.16 mm^2
pcb_bottom		91°C						
M1	CSD18504Q5A	115°C	1.346W	Texas Instruments	VdsMax=40.0V IdsMax=50.0Amps	1	$0.37	 TRANS_NexFET_Q5A 55.2 mm^2
M2	CSD18504Q5A	148°C	1.887W	Texas Instruments	VdsMax=40.0V IdsMax=50.0Amps	1	$0.37	 TRANS_NexFET_Q5A 55.2 mm^2

Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
L1	SRP1270-4R7M	85°C	1.527W	Bourns	L=4.7E-6H DCR=0.0112Ohm	1	$0.6	 SRP1270 246.49 mm^2
Rsns2	PMR100HZPFU8L00	77°C	0.218W	Rohm		1	$0.16	 2512 43.16 mm^2
Cin	KCM55WR7YA336MH01K	73°C	0.00W	MuRata	VDC=35.0V ESR=0.0Ohm IRMS=0.0A Cap=3.3E-5F	1	$1.51	 KCM55W 59.13 mm^2
Cout	GRM32ER71J106KA12L	81°C	0.00W	MuRata	VDC=63.0V ESR=0.0Ohm IRMS=0.0A Cap=1.0E-5F	3	$0.27	 1210_280 14.7 mm^2
U1	TPS43060RTER	76°C	0.095W	Texas Instruments		1	$1.25	 S-PVQFN-N16 16.81 mm^2
pcb_top		148°C						

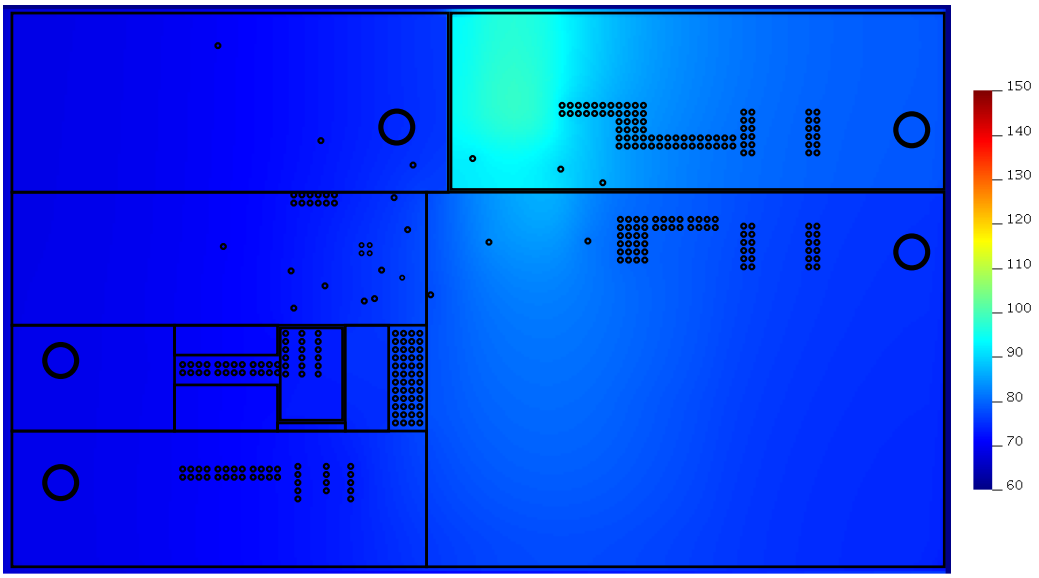
Thermal Images



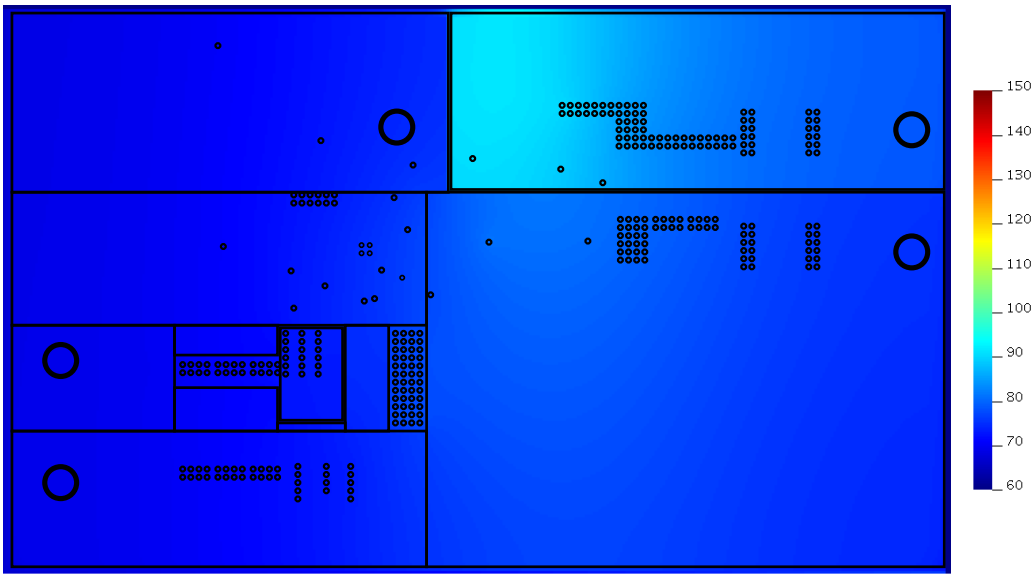
Thermal Top Image



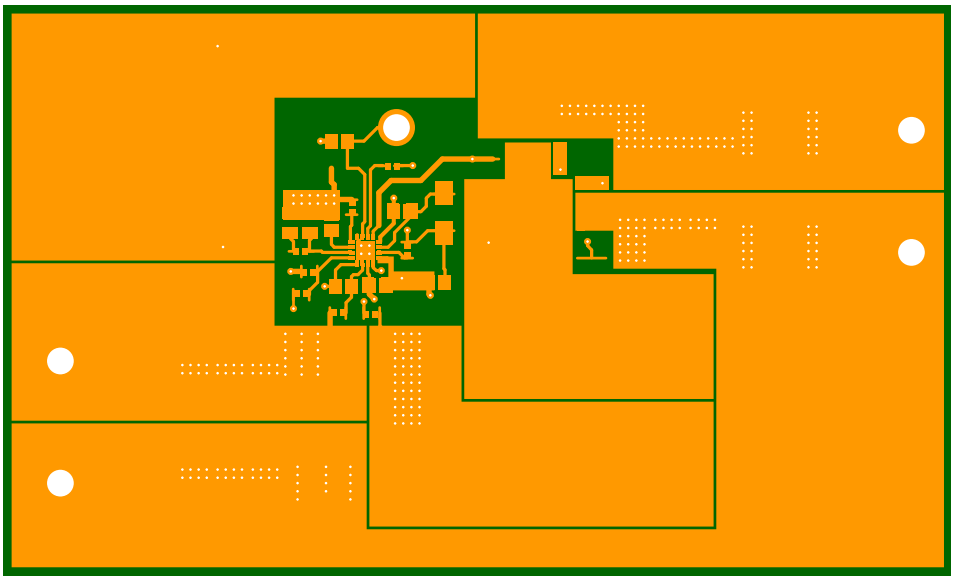
Thermal Bottom Image



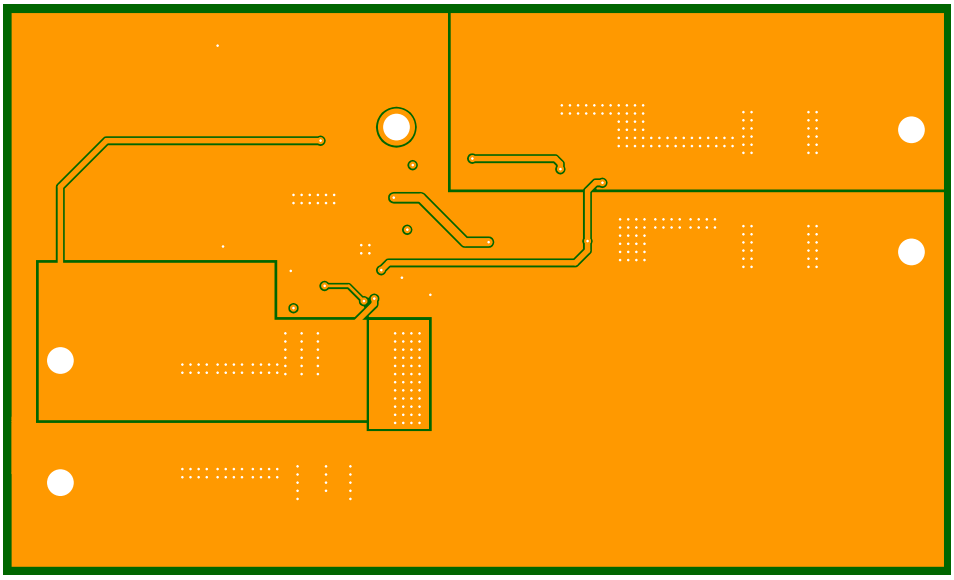
Thermal MID1 Image



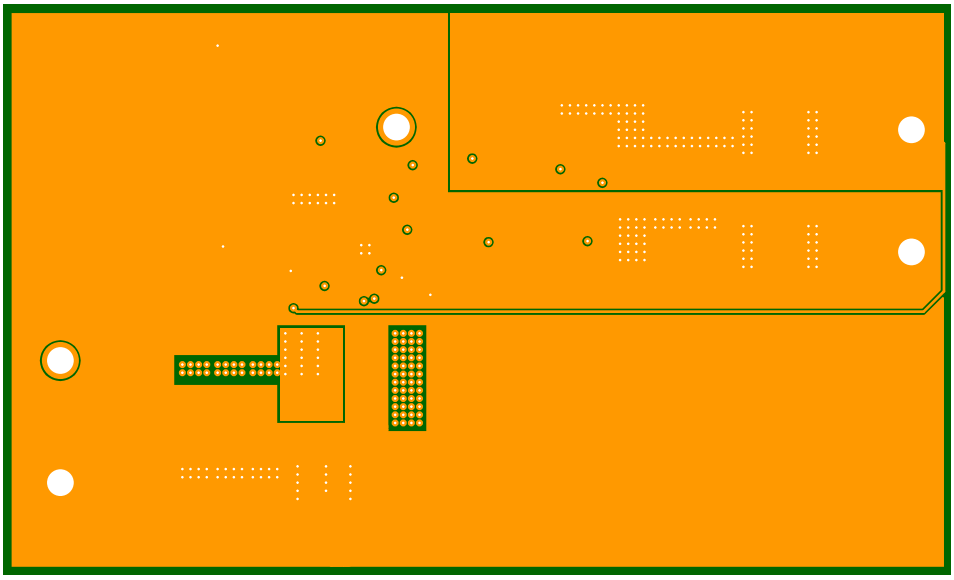
Thermal MID2 Image



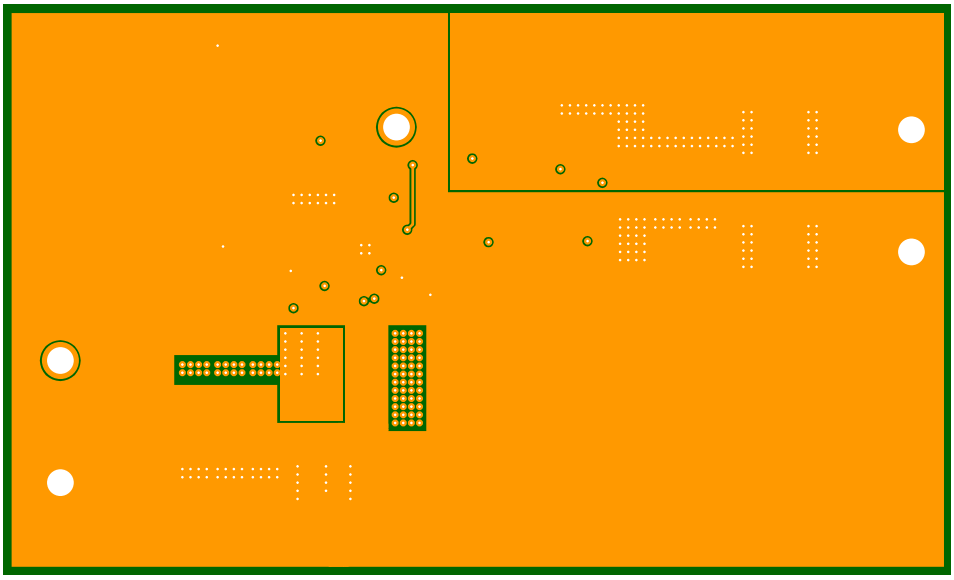
PCB Top Image



PCB Bottom Image

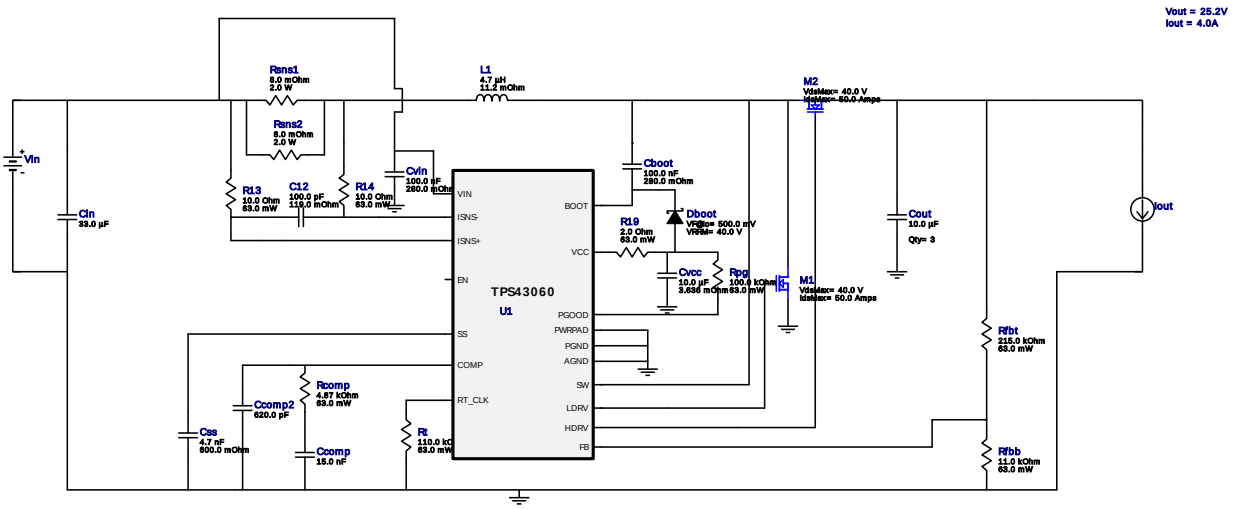


PCB MID1 Image



PCB MID2 Image

Schematic



Design Assistance

1. Feature Highlights: Low Quiescent Current Boost Controller, Wide Vin Range 4.5V to 38V Vin, 58V Vout, 7.5V Gate Drive optimized for standard MOSFET Thresholds Thermal Shutdown

2. **TPS43060** Product Folder : http://www.ti.com/product/TPS43060 : contains the data sheet and other resources.