

VinMin = 10.0V VinMax = 15.0V Vout = 1.8V lout = 2.0A Device = TPS563200DDCR Topology = Buck Created = 7/14/15 5:16:43 AM BOM Cost = \$1.46 Total Pd = 0.53W Footprint = 101.0 mm² BOM Count = 7 tSim Id = 1

WEBENCH [®] Thermal Simulation Report

Design: 4166583/37 TPS563200DDCR TPS563200DDCR 10.0V-15.0V to 1.80V @ 2.0A

Operating Condition

Name	Value		
VIN_OP	15.0V		
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

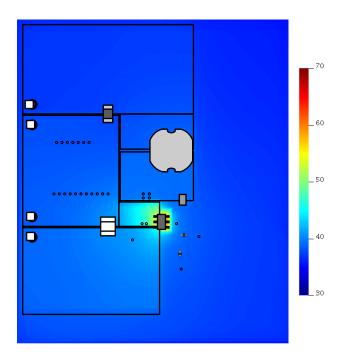
Edge Temperature

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

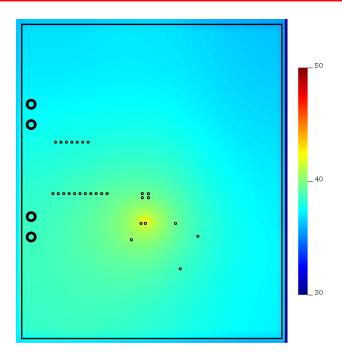
BOM

Component Name(s)	Part Number	Max Temp	Power Dissipation	Manufacture	Properties	Qty	Price	Footprint
pcb_bottom		43°C						
L1	SRN8040-2R2Y	39°C	0.053W	Bourns	L=2.2E-6H DCR=0.013Ohm	1	\$0.22	SRN8040 100.0 mm ²
Cin	GRM32ER61E226KE15L	41°C	0.001W	MuRata	VDC=25.0V ESR=0.002Ohm IRMS=3.67A Cap=2.2E-5F	1	\$0.16	1210 14.7 mm ²
Cout	GRM31CR60J476ME19L	37°C	0.00W	MuRata	VDC=6.3V ESR=0.003Ohm IRMS=0.0A Cap=4.7E-5F	1	\$0.12	1206 10.92 mm ²
U1	TPS563200DDCR	61°C		Texas Instruments		1	\$0.52	B
pcb_top		60°C						DDC0006A 10.468 mm ²

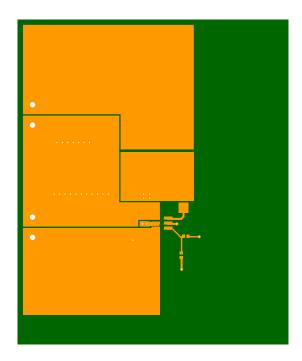
Thermal Images



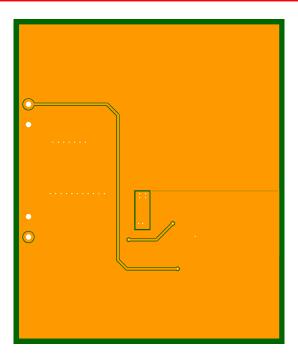
Thermal Top Image



Thermal Bottom Image

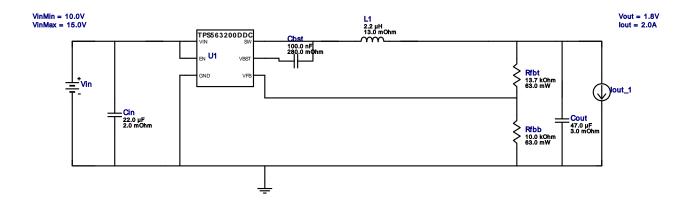


PCB Top Image



PCB Bottom Image

Schematic



Design Assistance

1. TPS563200 Product Folder: http://www.ti.com/product/TPS563200: contains the data sheet and other resources.

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