TEXAS INSTRUMENTS

VinMin = 10.0V
VinMax = 15.0V
Vout = 5.0V
Iout = 0.5A

Device = LMZ35003RKGR
Topology = Buck
Created = 6/17/15 1:43:04 AM
BOM Cost = $8.30
Total Pd = 0.37W
Footprint = 225.0 mm^2
BOM Count = 8
tSim Id = 1

WEBENCH® Thermal Simulation Report

Design : 4049284/5 LMZ35003RKGR
LMZ35003RKGR 10.0V-15.0V to 5.00V @ 0.5A

Operating Condition

Name	Value
VIN_OP	15.0V
IOUT_OP	0.5A

Ambient Temperature

Name	Temperature
Ambient_plus_Z	30.0
Ambient_minus_Z	30.0
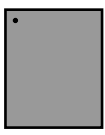
Air Flow

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		68°C						
Cin	GRM32ER61E226KE15L	60°C	0.00W	MuRata	VDC=25.0V ESR=0.002Ohm IRMS=3.67A Cap=2.2E-5F	1	$0.16	1210 14.7 mm^2
Cout	6SVPE220MW	57°C	0.003W	Panasonic	VDC=6.3V ESR=0.015Ohm IRMS=3.15A Cap=2.2E-4F	1	$0.14	CAPSMT_62_E61 53.29 mm^2
U1	LMZ35003RKGR	77°C		Texas Instruments		1	$7.95	RKG0041A 143.0 mm^2
pcb_top		79°C						

Thermal Images

Thermal Top Image

WEBENCH® Assembly Document   LMZ35003RKGR : LMZ35003RKGR 10.0V-15.0V to 5.00V @ 0.5A   June 17, 2015 01:49:30 GMT-07:00

Top Image

ti.com/webench

WEBENCH® Assembly Document   LMZ3   0.5A   June 17, 2015 01:49:30 GMT-07:00
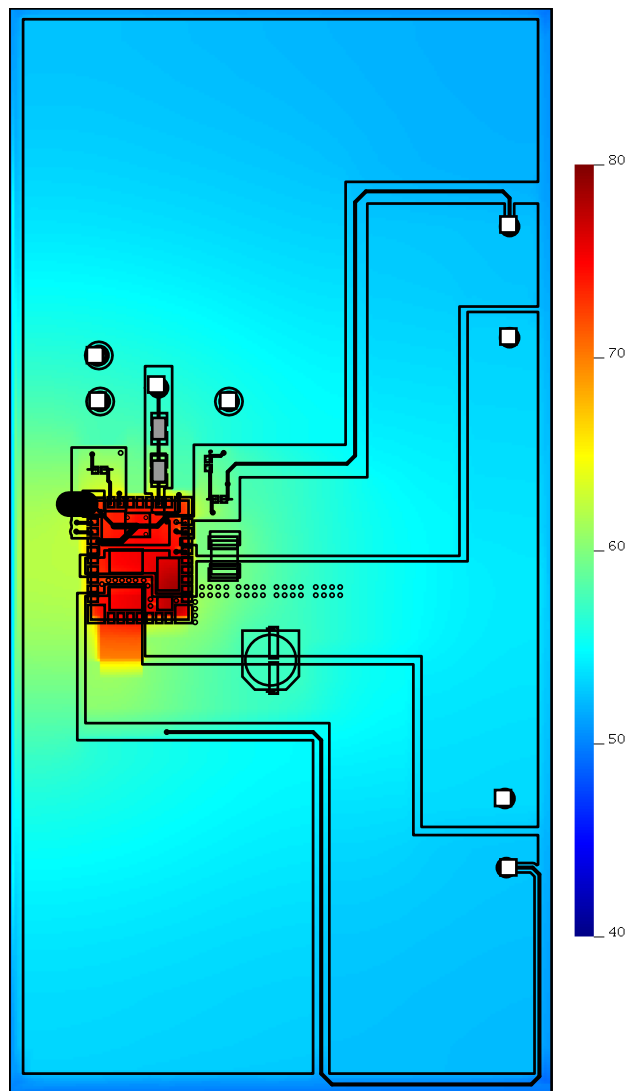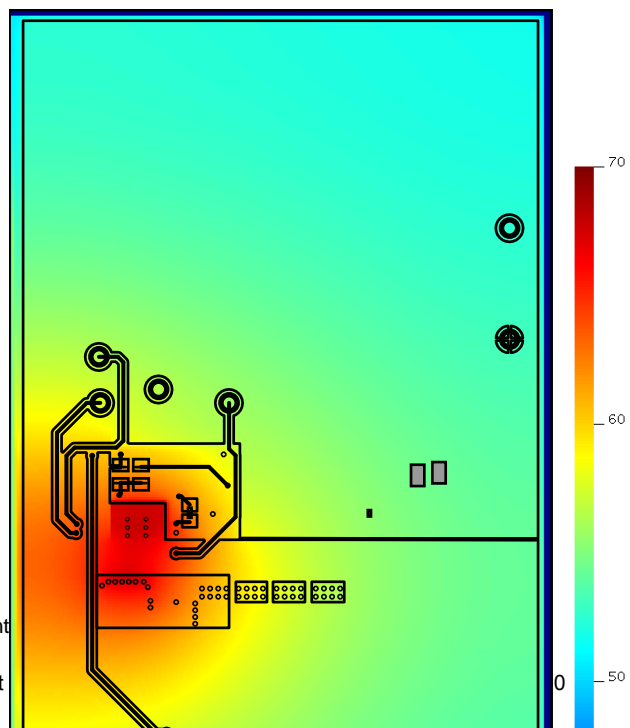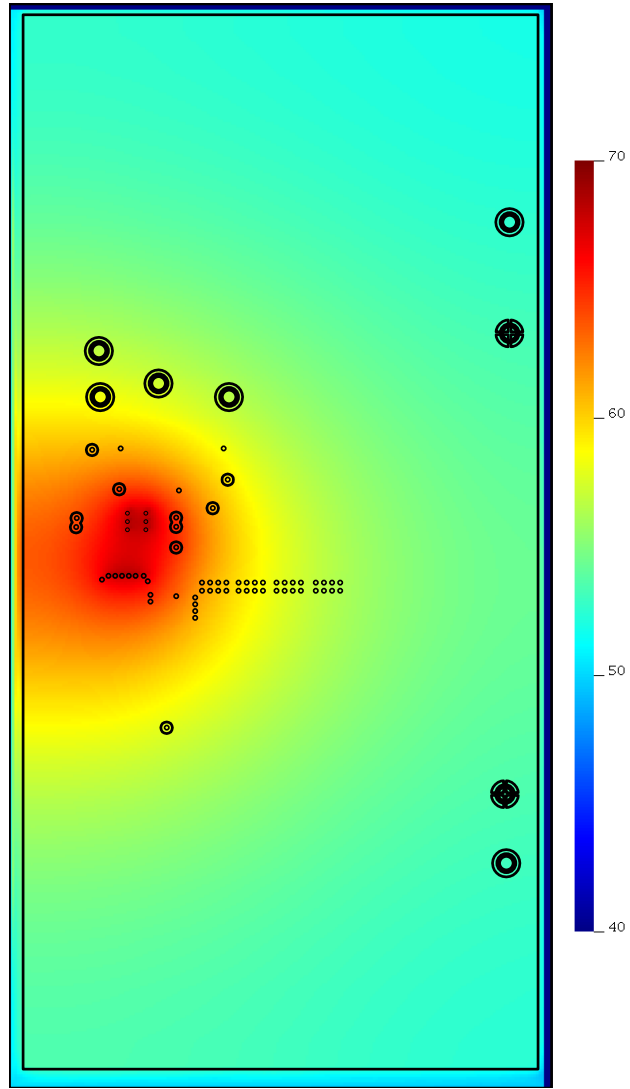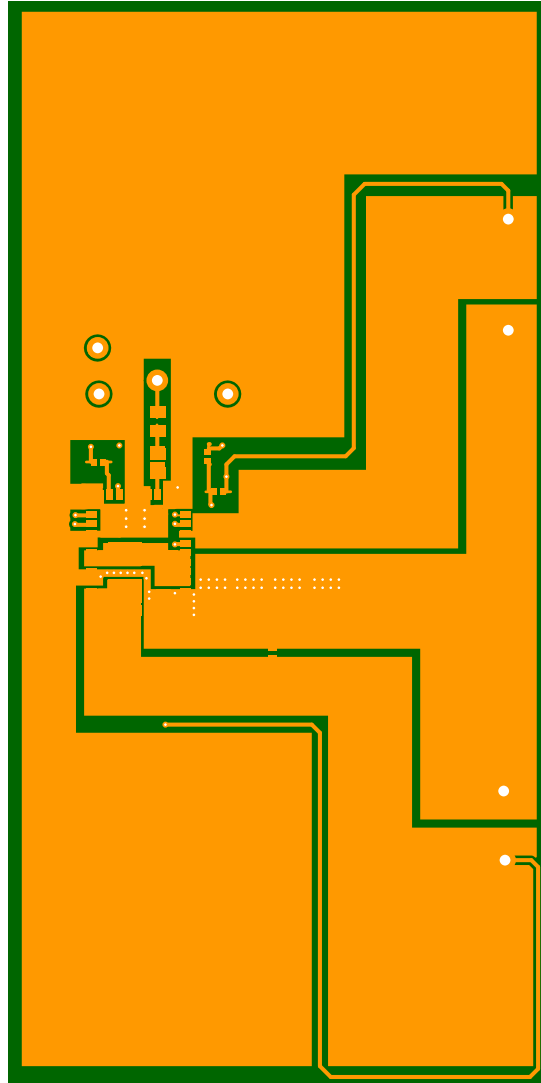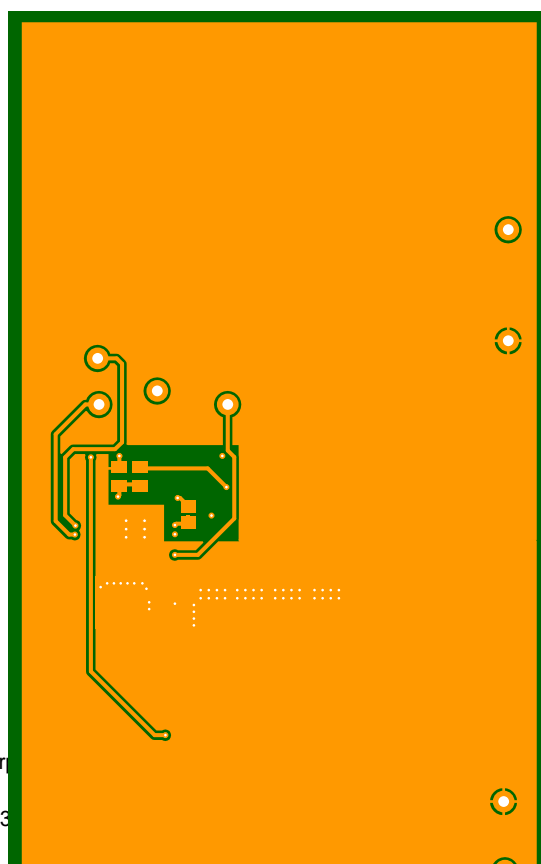
Schematic
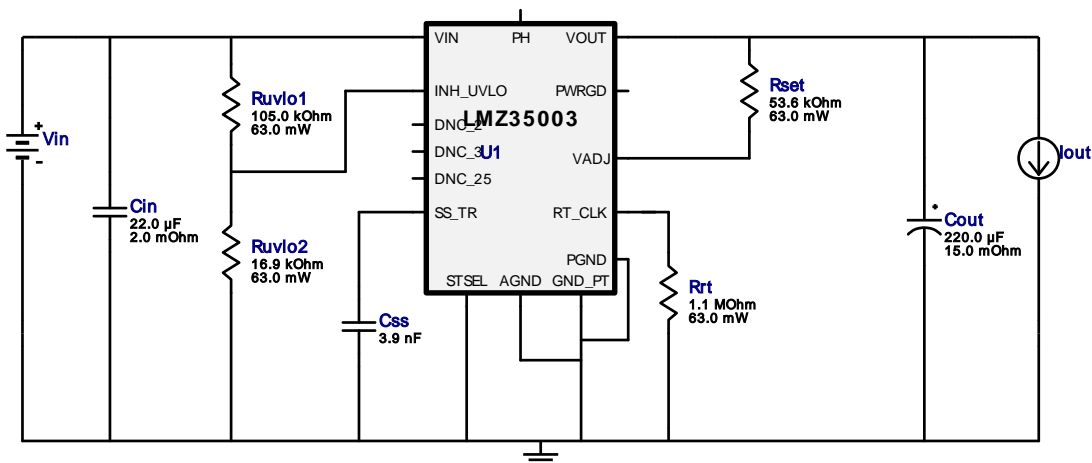
Design Assistance

1. LMZ35003 Product Folder : http://www.ti.com/product/LMZ35003 : contains the data sheet and other resources.