

# WEBENCH<sup>®</sup> 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 <sup>2</sup>
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 <sup>2</sup>
U1	LMZ35003RKGR	77°C		Texas Instruments		1	\$7.95	•
pcb_top		79°C						RKG0041A 143.0 mm <sup>2</sup>

VinMin = 10.0V

VinMax = 15.0V

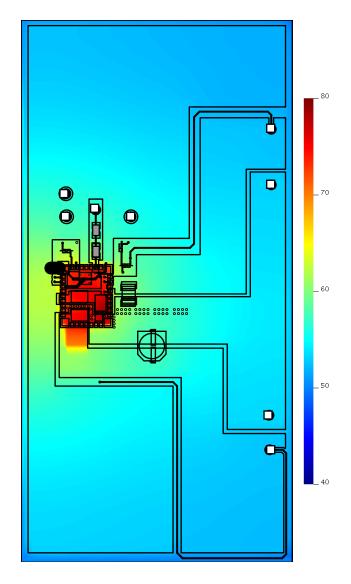
Vout = 5.0V

lout = 0.5A

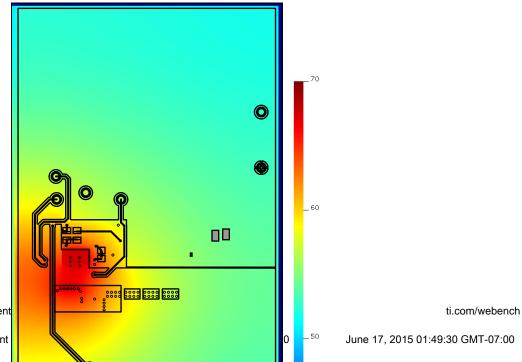
Copyright © 2015, Texas Instruments Incorporated

ti.com/webench

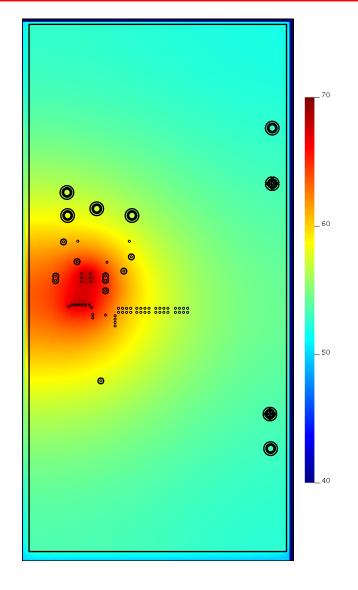
## Thermal Images



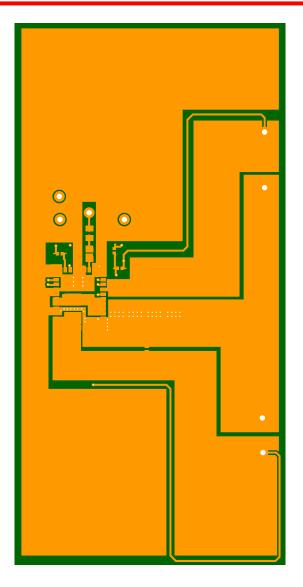
Thermal Top Image



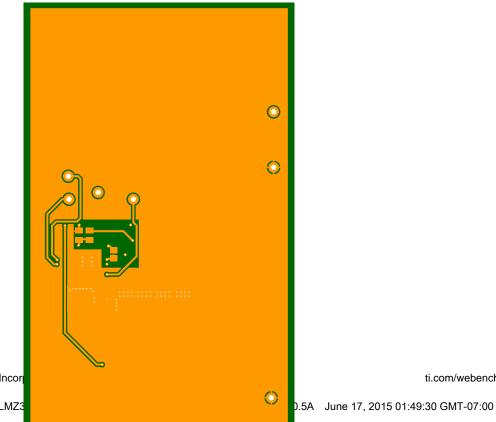
Copyright © 2015, Texas Instrument WEBENCH<sup>®</sup> Assembly Document



3

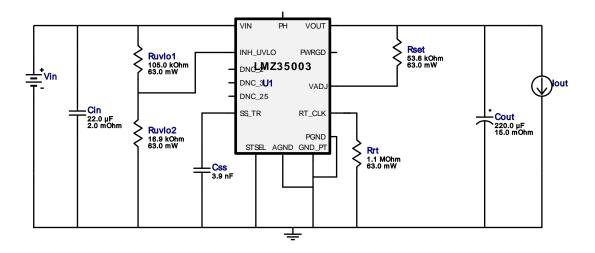


Top Image



Copyright © 2015, Texas Instruments Incor WEBENCH<sup>®</sup> Assembly Document LMZ3 ti.com/webench

### Schematic



### **Design Assistance**

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

Texas Instruments' WEBENCH simulation tools attempt to recreate the performance of a substantially equivalent physical implementation of the design. Simulations are created using Texas Instruments' published specifications as well as the published specifications of other device manufacturers. While Texas Instruments does update this information periodically, this information may not be current at the time the simulation is built. Texas Instruments does not warrant the accuracy or completeness of the specifications or any information contained therein. Texas Instruments does not warrant that any designs or recommended parts will meet the specifications you entered, will be suitable for your application or fit for any particular purpose, or will operate as shown in the simulation in a physical implementation. Texas Instruments does not warrant that the designs are production worthy.

## You should completely validate and test your design implementation to confirm the system functionality for your application prior to production.

Use of Texas Instruments' WEBENCH simulation tools is subject to Texas Instruments' Site Terms and Conditions of Use. Prototype boards based on WEBENCH created designs are provided AS IS without warranty of any kind for evaluation and testing purposes and are subject to the terms of the Evaluation License Agreement.