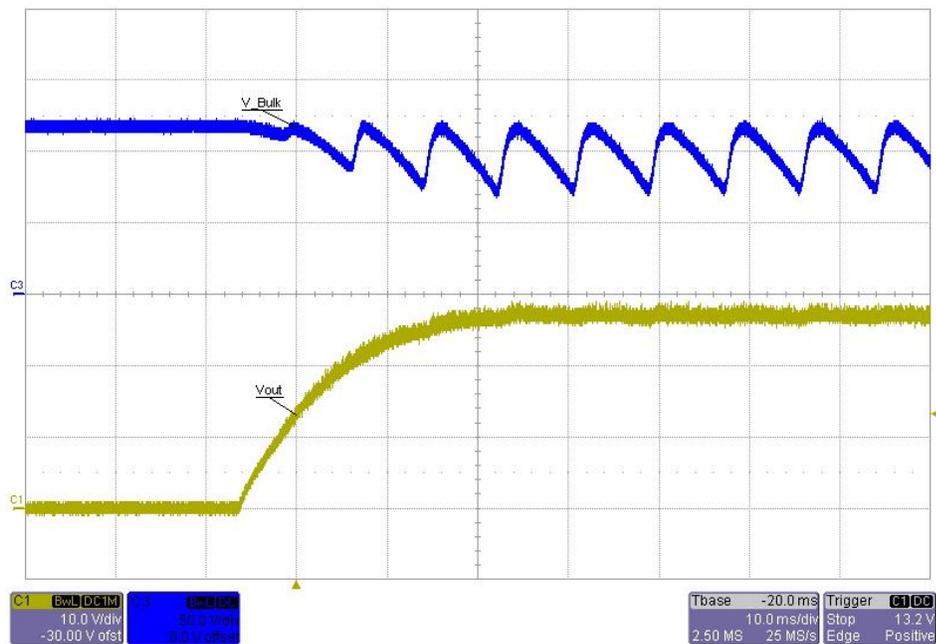


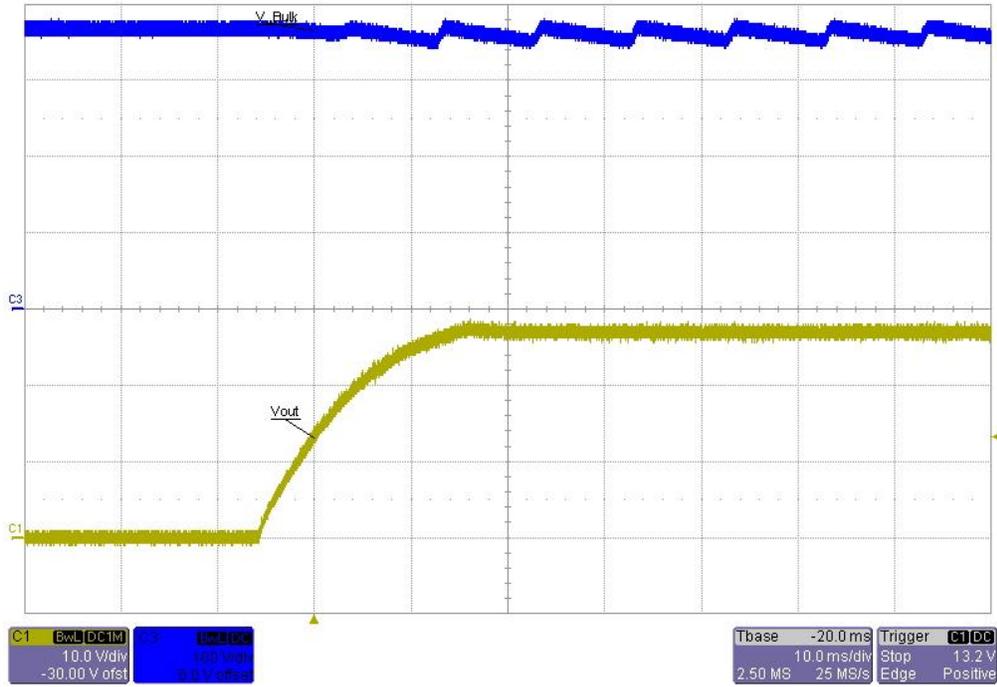
1 Startup

Input voltage = 85VAC

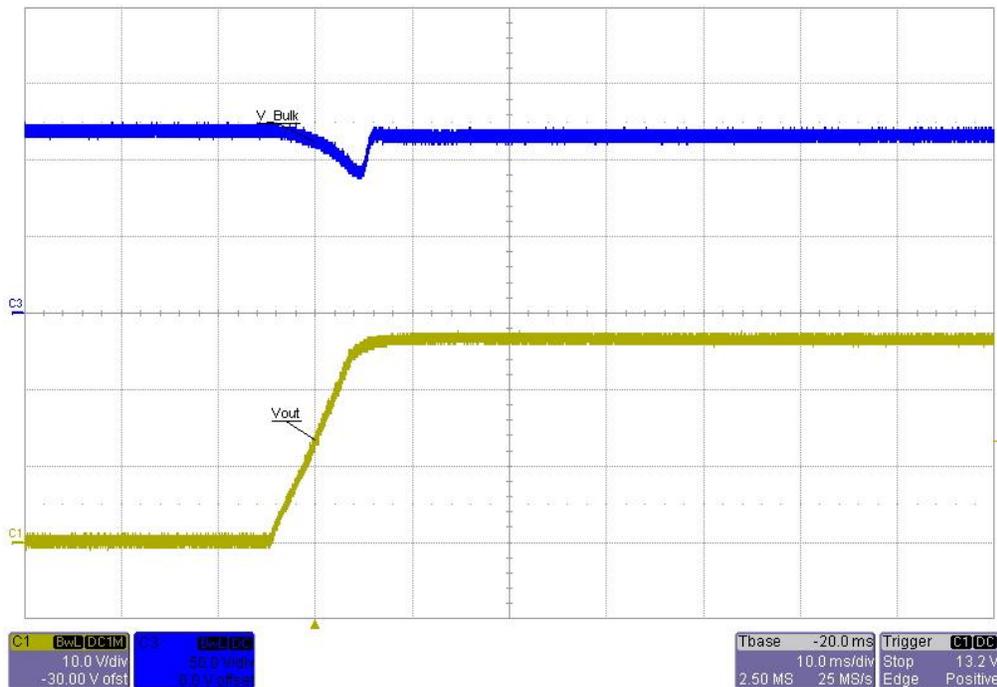
Output power = 162W (27V@6A)



Input voltage = 264VAC
Output power = 162W (27V@6A)

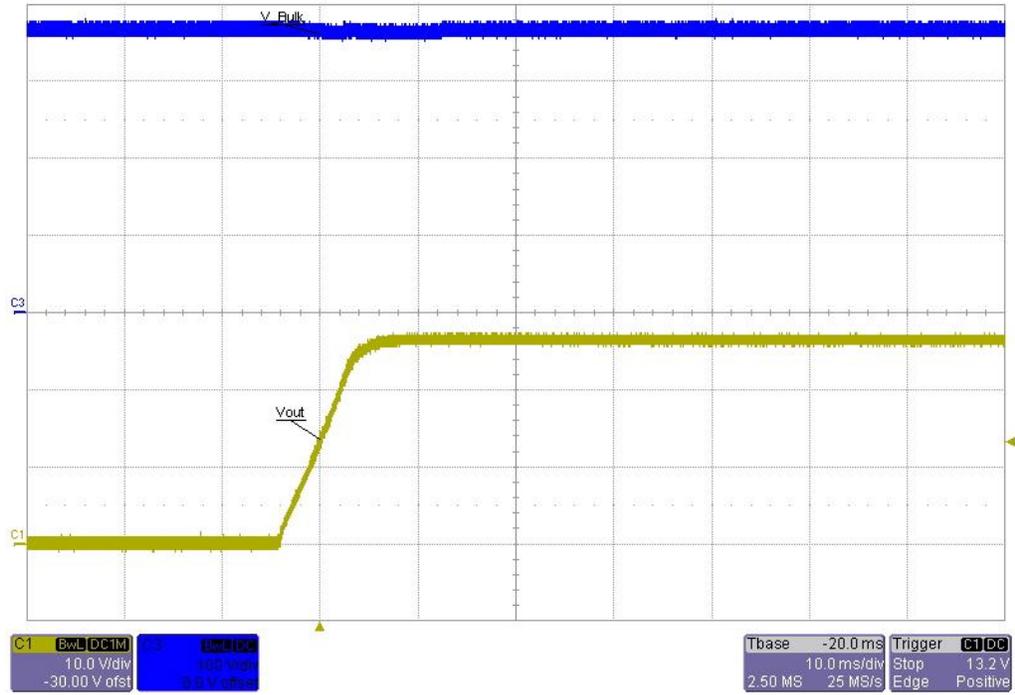


Input voltage = 85VAC
Output power = 0W (no load)



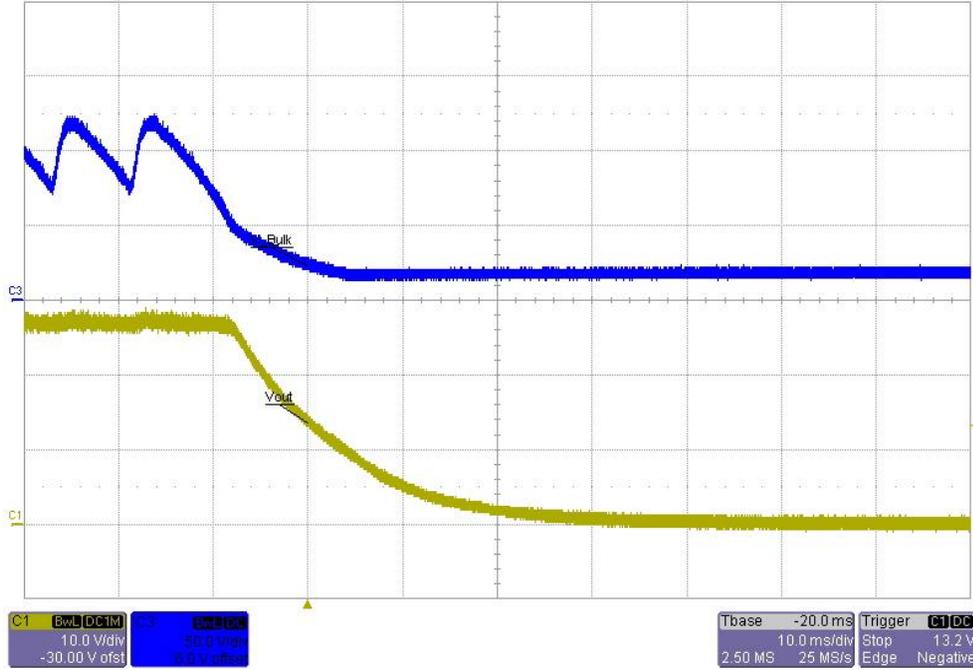
Input voltage = 264VAC

Output power = 0W (no load)

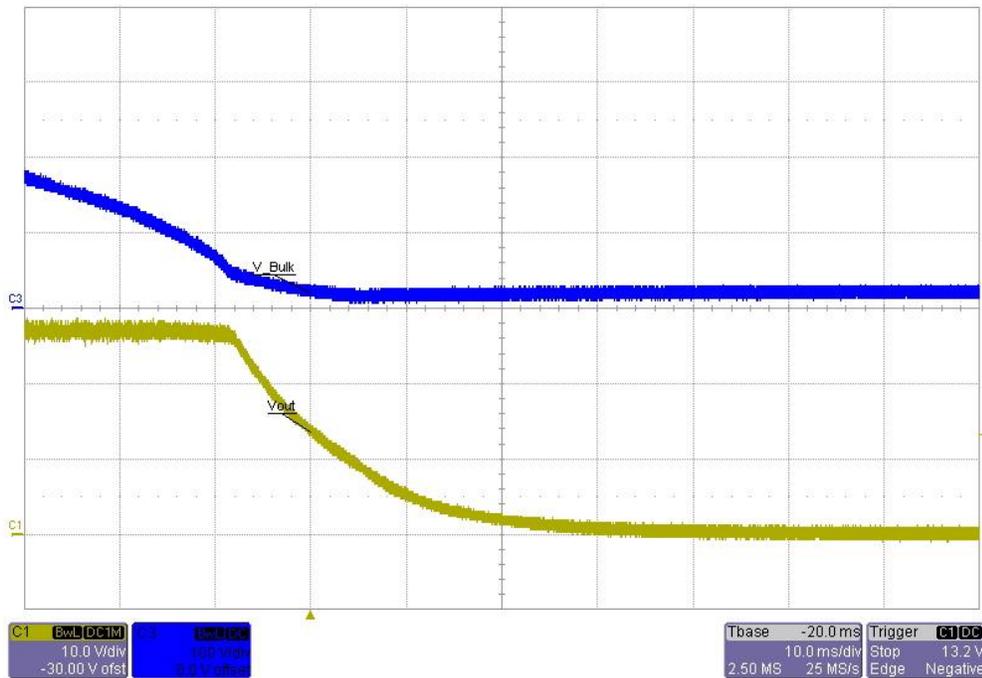


2 Shutdown

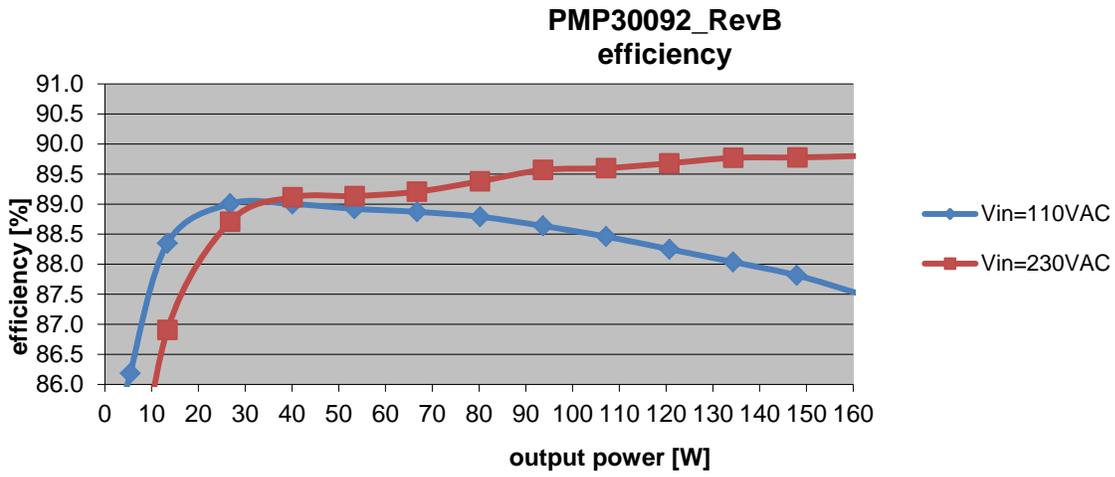
Input voltage = 85VAC
Output power = 162W (27V@6A)



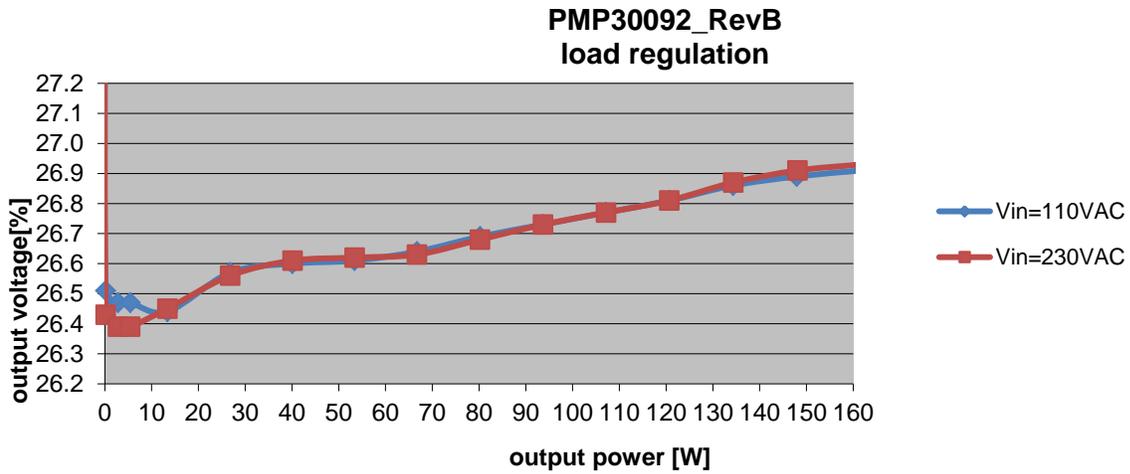
Input voltage = 264VAC
Output power = 162W (27V@6A)



3 Efficiency

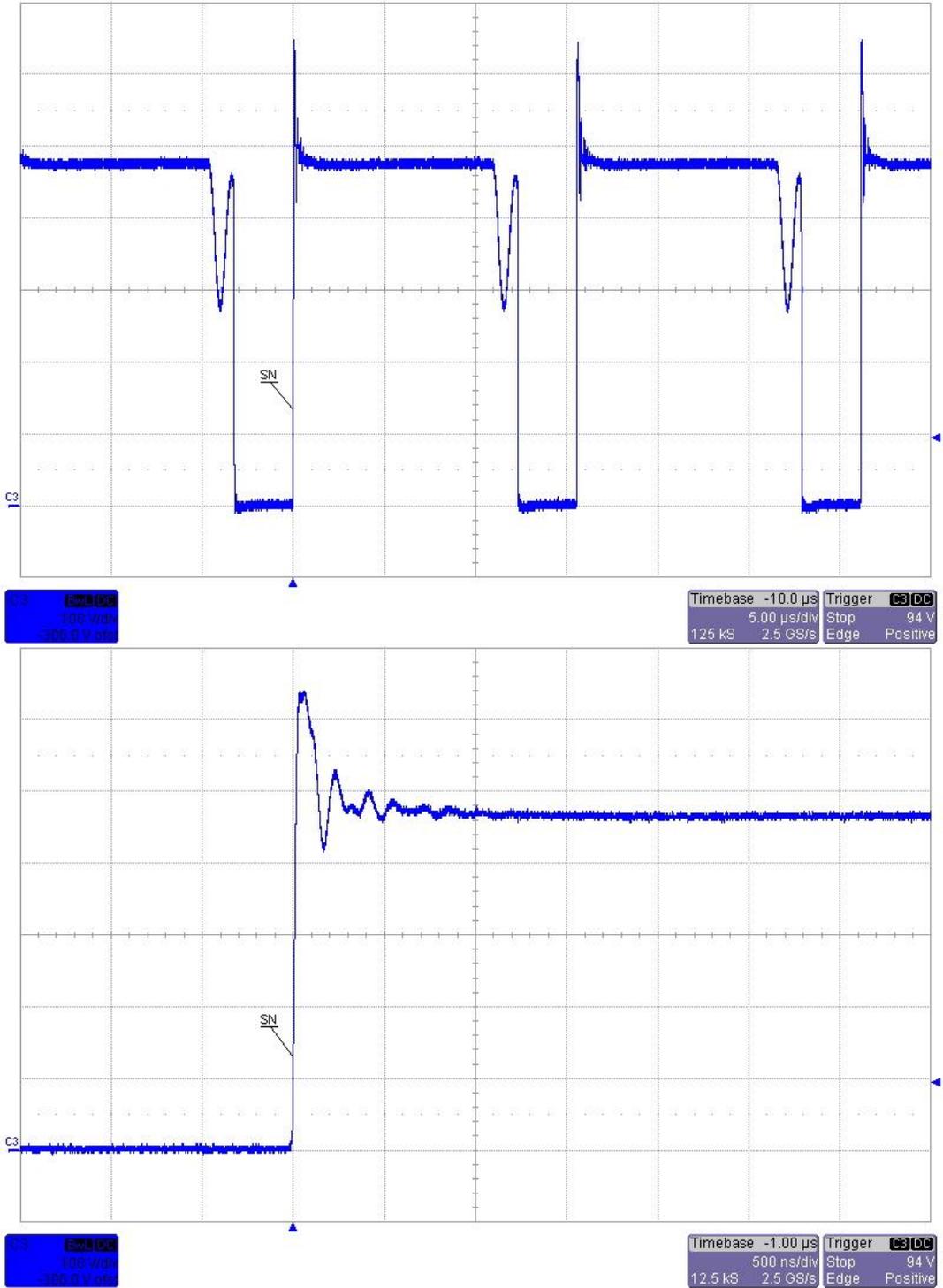


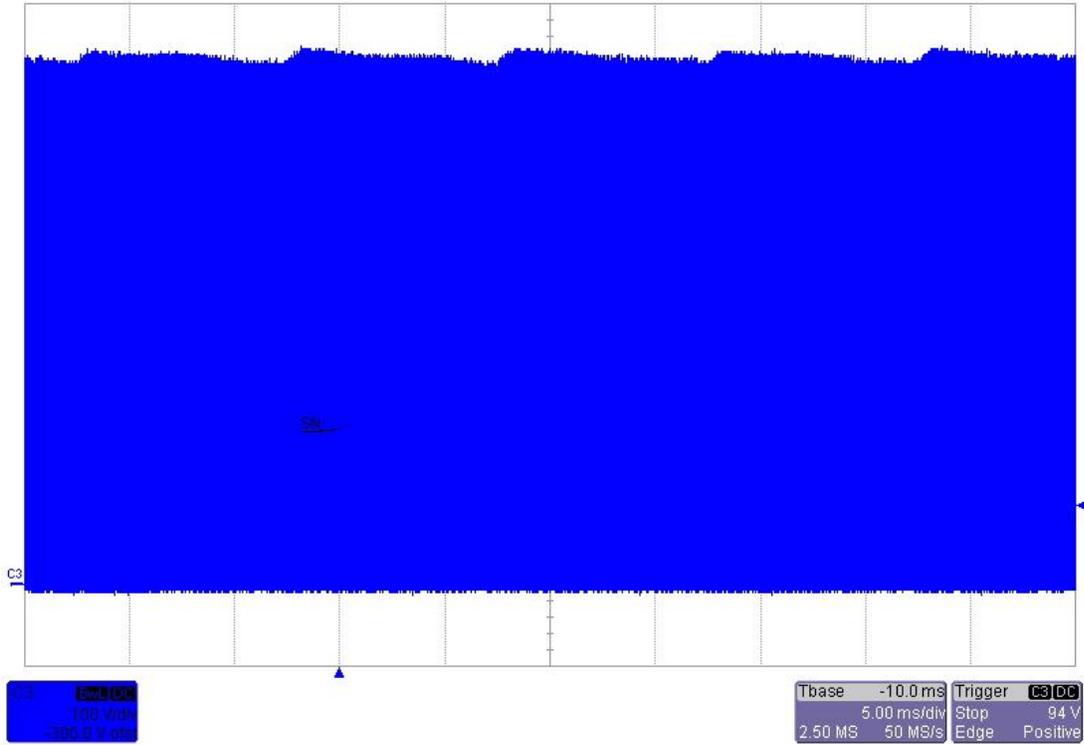
4 Load regulation



5 Switch Node

Input voltage = 264VAC
Output power = 162W (27V@6A)

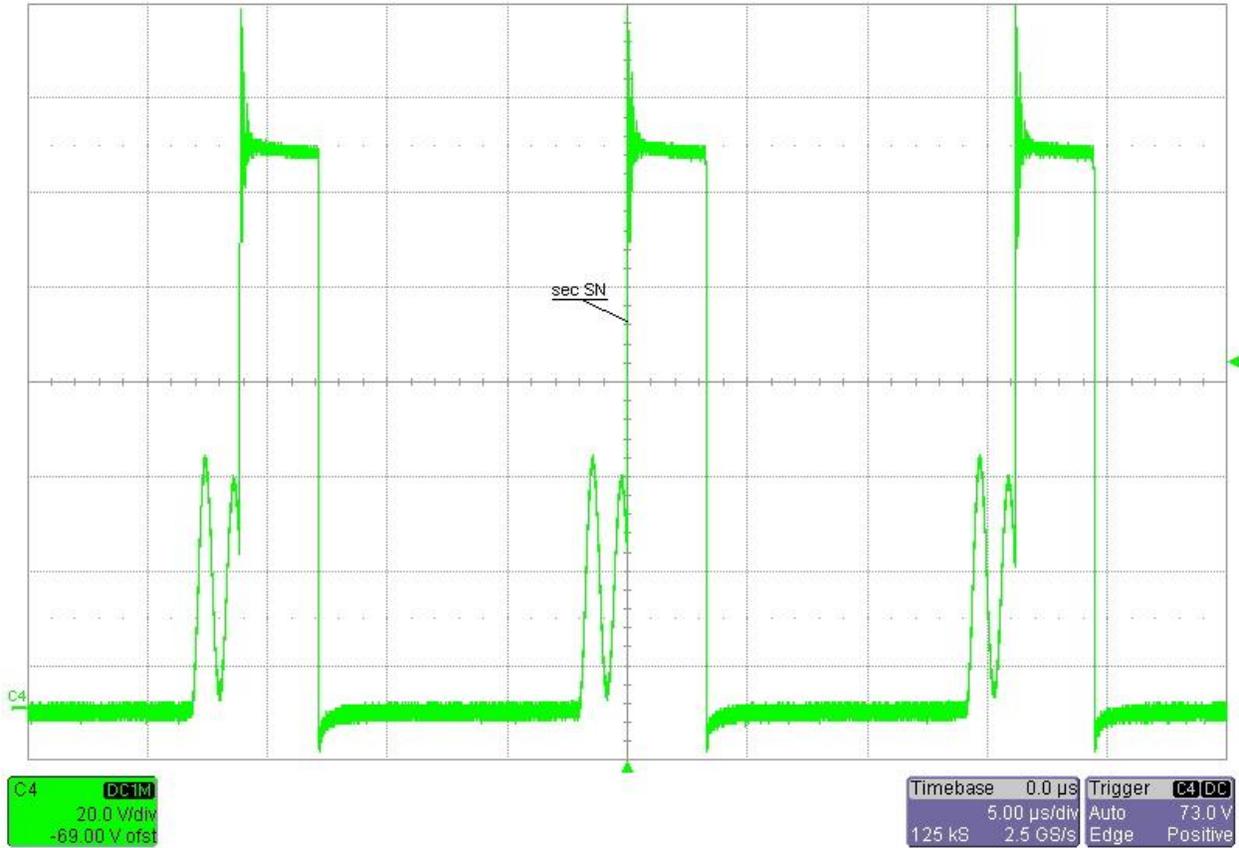




6 Switch Node secondary side

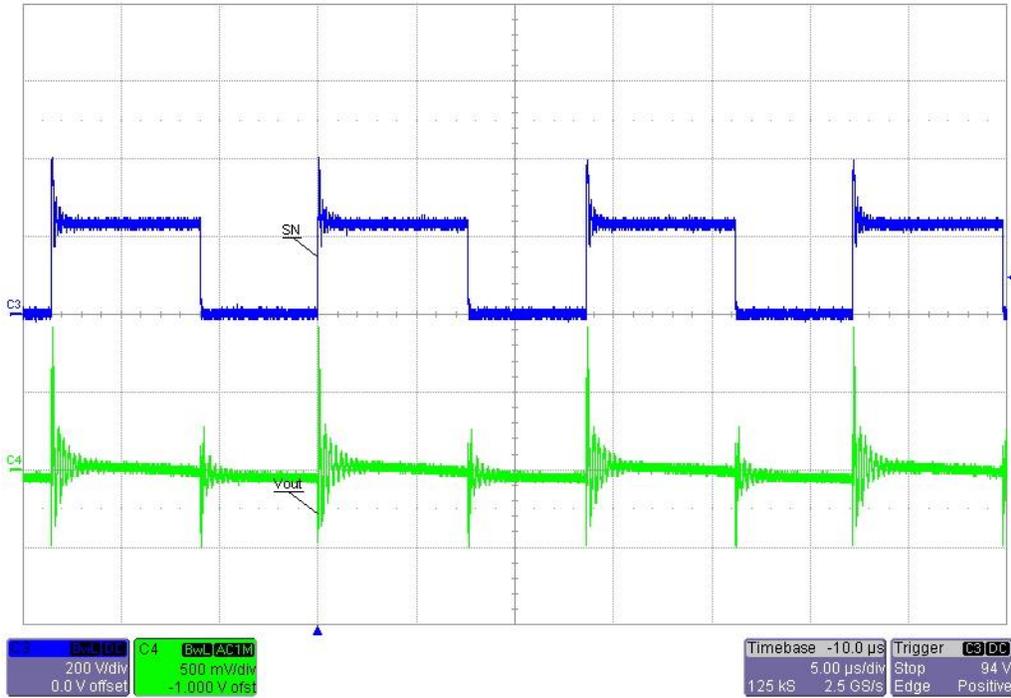
Input voltage = 264VAC

Output power = 162W (27V@6A)

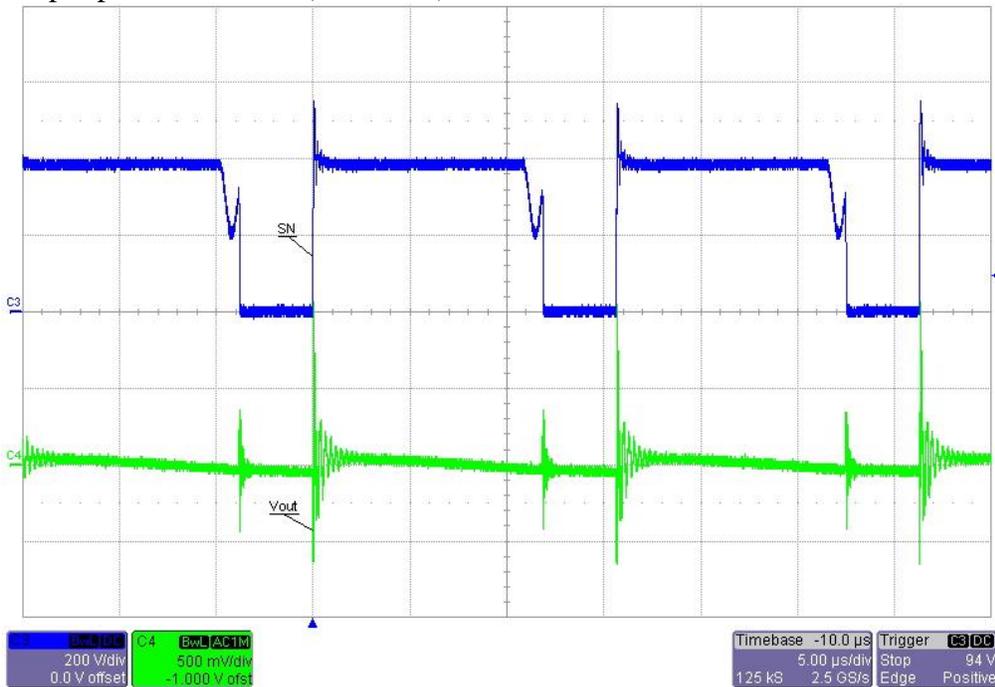


7 Output ripple voltage

Input voltage = 110VAC
Output power = 162W (27V@6A)

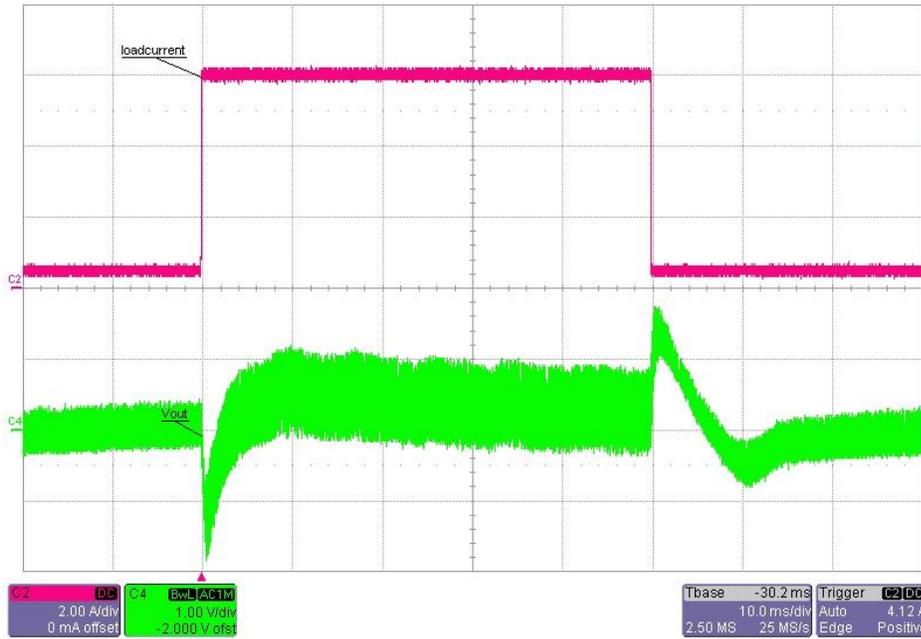


Input voltage = 264VAC
Output power = 162W (27V@6A)

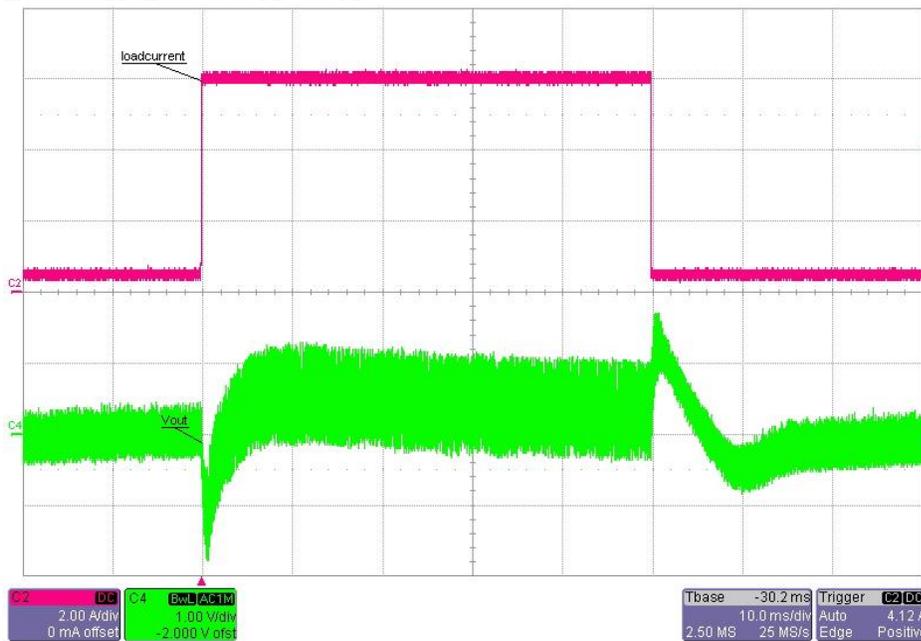


8 Load Transients

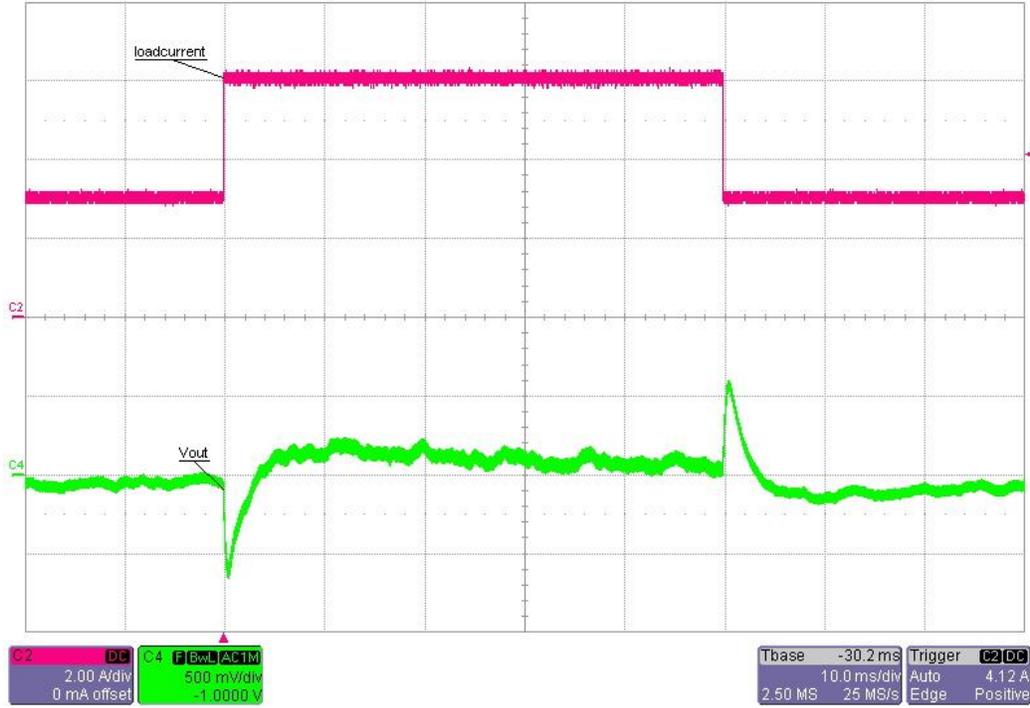
Input voltage = 110VAC
 Load current = 0.5A to 6A



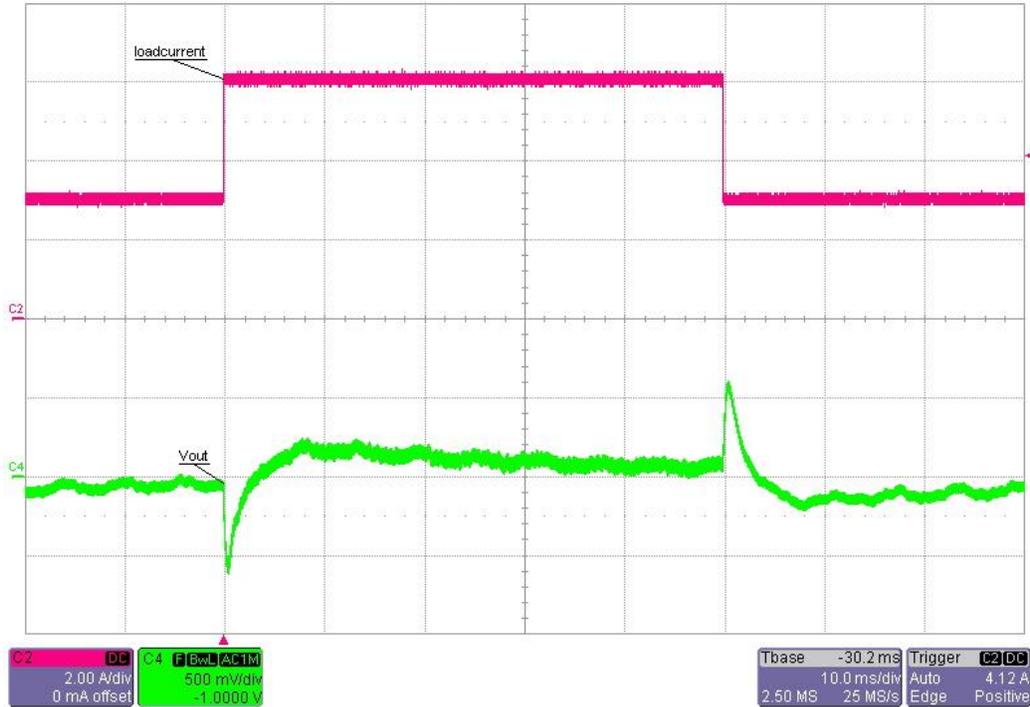
Input voltage = 110VAC
 Load current = 0.5A to 6A



Input voltage = 110VAC
Load current = 3A to 6A
(C4 measurement with digital filter)



Input voltage = 230VAC
Load current = 3A to 6A
(C4 measurement with digital filter)



9 Thermal Analysis

The images below show the infrared images taken from the FlexCam after **2min** at 162W output power.

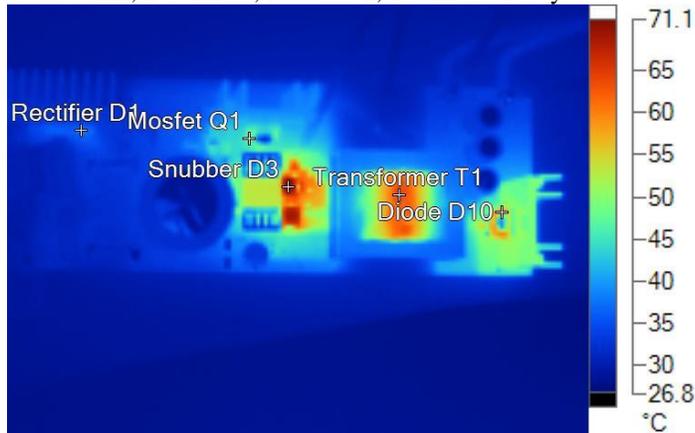
Input voltage = 110VAC
 Output power = 162W
 Ambient temperature = 25°C
 No heatsink, no airflow, 2min=on, 18min=stand-by



Name	Temperature
Rectifier D1	46.3°C
Snubber D3	74.3°C
Transformer T1	53.2°C
Mosfet Q1	59.6°C
Diode D10	58.4°C

110VAC Pout=162W(27V@6A) 2min.is2

Input voltage = 230VAC
 Output power = 162W
 Ambient temperature = 25°C
 No heatsink, no airflow, 2min = on, 18min=stand-by



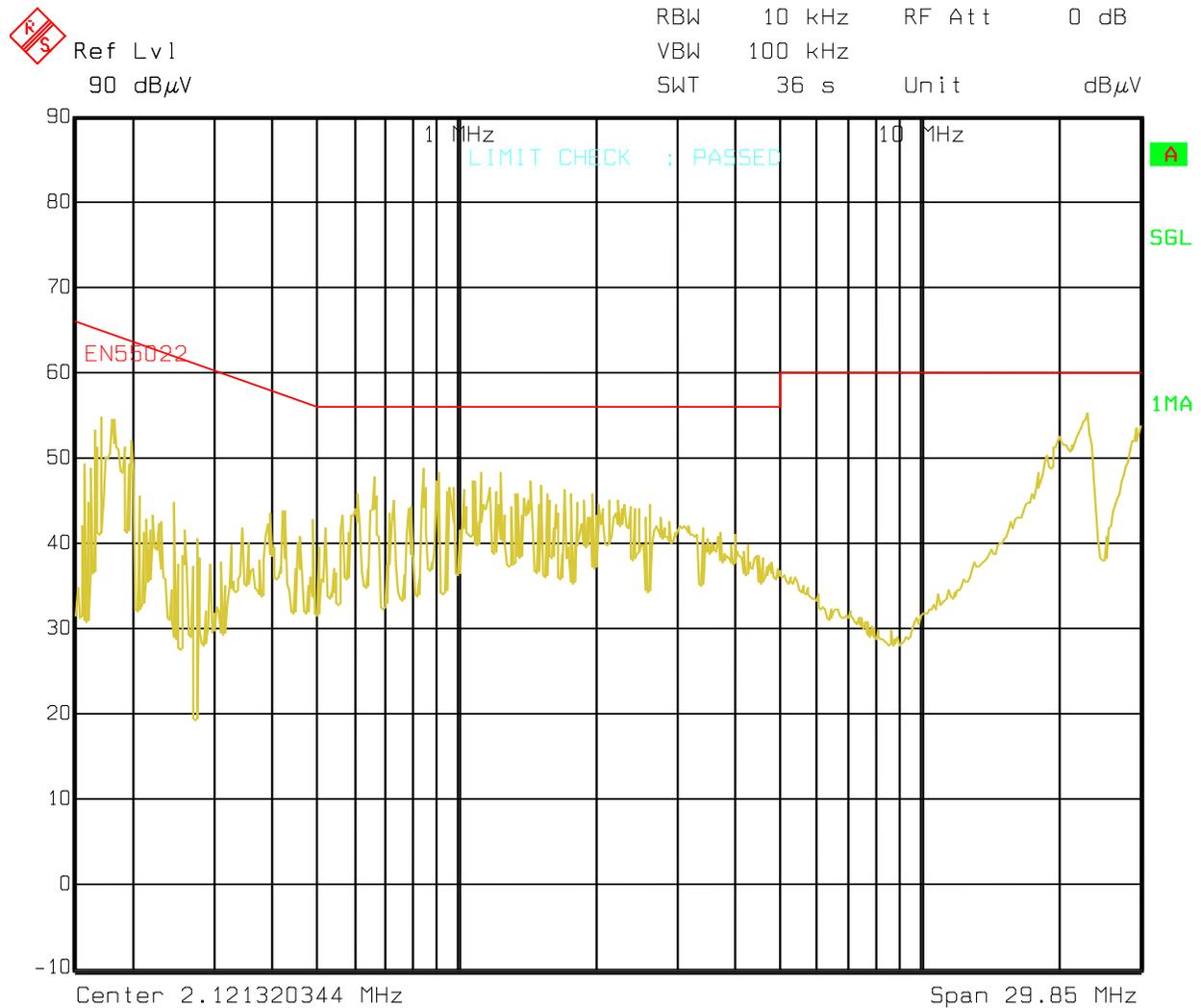
Name	Temperature
Rectifier D1	37.1°C
Mosfet Q1	47.2°C
Snubber D3	71.1°C
Transformer T1	64.1°C
Diode D10	59.1°C

230VAC Pout=162W(27V@6A) 2min.is2

10 EMI Measurement

The graph below shows the conducted emission EMI noise and the EN55022 Class-B Quasi-Peak limits (measurement from the worst case line). The measurement is not certified. The load was connected to a LISN and an isolation transformer; the load was a power resistor. The receiver was set to Quasi-peak detector, 10 KHz bandwidth. The negative terminal of the converter has been connected to the ground of the LISN.

Input voltage = 230VAC
 Output power = 162W (27V@6A)



Date: 1.JAN.1997 1:47:18

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<https://www.ti.com/legal/termsofsale.html>) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2021, Texas Instruments Incorporated