

## **Product Change Notification**



Product Group: Vishay Siliconix/December 11, 2015/ PCN-SIL-0362015

## Additional Commercial Power MOSFET Wafer Fabrication Capacity

**DESCRIPTION OF CHANGE:** To meet increasing demand for Vishay's Power MOSFET products, we have completed qualification on select commercial Low Voltage MOSFET products at our foundry partner Tower Semiconductor for wafer fabrication.

Tower Semiconductor has been a wafer foundry partner of Vishay Siliiconix since 1995. Founded in 1993, Tower Semiconductor is a worldwide supplier of wafer manufacturing services, and has achieved ISO-9001, ISO41001 and ISO/TS16949 certifications.

**CLASSIFICATION of CHANGE:** Additional wafer fabrication capacity

**EXPECTED INFLUENCE ON QUALITY/RELIABILTY/PERFORMANCE:** There will be no effect on quality or reliability.

**PRODUCT CATAGORY:** Commercial Low Voltage Power MOSFETs

PART NUMBERS/SERIES/FAMILIES AFFECTED: See pages 2 of this PCN.

VISHAY BRAND(s): Vishay Siliconix

**TIME SCHEDULE:** Shipments with products containing Tower Semiconductor die will begin in Quarter 1 of 2016 for those products having completed qualification for transfer.

**SAMPLE AVAILABILITY:** Please contact your regional Vishay Sales office for sample availability of products which have completed qualification for wafer fabrication transfer to Tower Semiconductor.

**QUALIFICATION DATA:** Reliability test results will be available upon the completed qualification of those parts scheduled for transfer.

**PRODUCT IDENTIFICATION:** Products containing Tower Semiconductor Die will be identified by a "K" in the 4<sup>th</sup> character position of the part marking datecode.

This PCN is considered approved, without further notification, unless we receive specific customer concerns before March 11, 2016 or as specified by contract.

**ISSUED BY:** Dave MacDonald, Vishay Siliconix, Senior Manager, Technical Marketing. E-mail address: <a href="mailto:Dave.macdonald@Vishay.com">Dave.macdonald@Vishay.com</a>

For further information, please contact your regional Vishay office.

#### **CONTACT INFORMATION:**

The Americas Vishay Americas 2201 Laurelwood Rd Santa Clara, Ca 95054 T: 408-567-8500

F: 2408-567-8942

Europe

Vishay Electronic GmbH Geheimrat-Rosenthal-Strasse 100

D-95100 Selb, Germany T: 49-9287-71 0 F: 49-9287-70435 Asia

Vishay Intertechnology Asia Pte. Ltd 25 Tampines Street 92 #02-00 Keppel Building Singapore 52887 T: 65-6780-7838 F: 65-6780-7791

Vishay Intertechnology, Inc.



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# Product GPart Nymber List II Cattoli



| SI4497DY-T1-GE3   | SI7629DN-T1-GE3   |  |  |
|-------------------|-------------------|--|--|
| SI5411EDU-T1-GE3  | SI7655ADN-T1-GE3  |  |  |
| SI5415AEDU-T1-GE3 | SI7655DN-T1-GE3   |  |  |
| SI5415EDU-T1-GE3  | SI7997DP-T1-GE3   |  |  |
| SI7101DN-T1-GE3   | SIA437DJ-T1-GE3   |  |  |
| SI7137DP-T1-GE3   | SIA439EDJ-T1-GE3  |  |  |
| SI7141DP-T1-GE3   | SIA453EDJ-T1-GE3  |  |  |
| SI7145DP-T1-GE3   | SIA467EDJ-T1-GE3  |  |  |
| SI7149ADP-T1-GE3  | SIR401DP-T1-GE3   |  |  |
| SI7157DP-T1-GE3   | SIS415DNT-T1-GE3  |  |  |
| SI7615ADN-T1-GE3  | SIS435DNT-T1-GE3  |  |  |
| SI7615BDNT-T1-GE3 | SIS439ADNT-T1-GE3 |  |  |
| SI7615DN-T1-GE3   | SIS443DN-T1-GE3   |  |  |
| SI7623DN-T1-GE3   | SISS23DN-T1-GE3   |  |  |
| SI7625DN-T1-GE3   | SISS27DN-T1-GE3   |  |  |



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### **Qualification for Wafer Fabrication Technology Transfer**

All Wafer Fabrication Technology transfers receive a full qualification based on MIL-STD-883 and MIL-STD-750 criteria using 3 lots. After a Wafer Fabrication Technology is qualified all subsequent devices released related to this platform technology will have been qualified by *Extension* – 1 lot tested to HTRB, HTGB, and ESD.

### **Qualification Test Table**

| Qualification test                   | Conditions                                | # of Lots, # of samples<br>per lot | Time Scale<br>Hours/Cycles | Results:<br>samples<br>tested/# of<br>failures | Comments                             |
|--------------------------------------|---|------------------------------------|----------------------------|--|--------------------------------------|
| 1a. Solder Reflow<br>Preconditioning | 168 hr 85/85<br>3 cyc @ 250C max          |                                    |                            |  | This test shall apply to test 4 to 6 |
| 2. HTRB                              | Ta = 150°C<br>Vds = 80% rating of Vds     | 3 Lots, 82 samples per lot         | 1000 Hours                 | 246/0  |                                      |
| 3. HTGB                              | Ta = 150°C<br>Vgs = 100% rating of Vgs    | 3 Lots, 82 samples per lot         | 1000 Hours                 | 246/0  |                                      |
| Temperature Cycling                  | -65°C to +150°C<br>air to air             | 3 Lots, 55 samples per lot         | 1000 Cycles                | 246/0  |                                      |
| 5. Pressure Pot                      | +121°C, 15 PSIG                           | 3 Lots, 55 samples per lot         | 96 Hours                   | 246/0  |                                      |
| 6. HAST                              | +130°C, 85%RH<br>Vgs = 100% rating of Vgs | 3 Lots, 55 samples per lot         | 100 Hours                  | 246/0  |                                      |