

## PRODUCT / PROCESS CHANGE NOTIFICATION

## To Be Completed By Change Initiator

DATE: May 28, 2014

NOTIFICATION REF:

 APPROVAL  NOTIFICATION

PRODUCT / PROCESS REFERENCE: TO-254 low-ohmic packages; internal design modification

TYPE OF CHANGE:  MAJOR  MINOR  EDITORIAL PROCESS  PRODUCT**DETAILED DESCRIPTION OF CHANGE:** (Include From / To condition and specific document(s) that are changing)

Design modification within the internal construction of the package; Copper plate brazed onto the BeO substrate assembly has been reduced in size and will now be only at the drain entry site and not in the die attach reflow area.

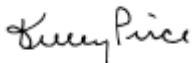
**DETAILED REASON FOR CHANGE:**

As a product improvement activity to improve CTE matching between the Low ohmic package copper plated BeO and Silicon die, IR has redesigned the low-ohmic packages to remove the copper element from the die bond BeO platform. Engineering models, analysis and performance testing clearly confirm that this package modification effectively reduces the residual stress on the die, and improves production yields. While this improves the manufacturability, it adds slight resistance with the RDSON parameter limit, up to 1 mohm higher than previous package configuration. Note; products effected are tested for RDSON prior to shipment devices not meeting the specification would be removed from the lot.

This design modification was coordinated with DLA per table E-III (Test guidelines for changes to qualified products) of MIL-PRF-19500. IR has obtained qualification approval as of May 16, 2014.

**EFFECTIVITY DATE:** June 2014**IMPACT OF CHANGE:** Slight increase in RDSON (see above)

Change Initiator:



Kelley Price  
JAN Military Program Manager

Approved By:



Paul Hebert  
Director of Quality Assurance

QPL part numbers affected;

QPL Number	GEN	Die Size	Voltage	Slash sheet
JANS2N7476T1	R5	6	200V	/ 685
JANS2N7471T1	R5	6	100V	/ 698
JANS2N7475T1	R5	6	130V	/ 685
JANS2N7470T1	R5	6	60V	/ 698
JANS2N7478T1	R5	6	30V	/ 697
JANS2N7477T1	R5	6	250V	/ 685
JANS2N7550T1	R5	6	100V	/ 713
JANS2N7549T1	R5	6	200V	/ 713
JANS2N7523T1	R5	6	30V	/ 733
JANS2N7524T1	R5	6	60V	/ 733



DEFENSE LOGISTICS AGENCY  
 LAND AND MARITIME  
 POST OFFICE BOX 3990  
 COLUMBUS, OH 43218-3990

May 21, 2014

Ms. Kelley Price  
 International Rectifier  
 205 Crawford St.  
 Leominster, MA 01453

Dear Ms. Price:

Re: Notification of Re-Qualification, MIL-PRF-19500P, Amend 1, FSC 5961, VQ (VQE-14-028008), CAGE 69210, Ctrl # 042739

Approval of re-qualification is granted under the current issue of the specification as a result of successful qualification testing of device JANSR2N7471T1 to Performance Specification MIL-PRF-19500P, Amendment 1, Semiconductor Devices, FSC 5961 and performance specification sheet /698E. This re-qualification was necessitated as a result of design modification to the TO-254 package (low ohmic) to improve die-package thermal matching; this modification did not impact thermal conditions and limits. Therefore, your products will be listed as shown below in the Qualified Manufacturers List (QML) 19500. The starting wafer lot number is 100HKW.1. The effective date of this qualification is May 13, 2014 and starting lot date code 1349.

Government Designation	Lead Finish	ESD Class 6/	Manufacturer Designation	Test Report Reference	Prf. Spec	Manufacturer Name & Address
SR 2N7470T1	C	3A	CCBS	19500-4149-14	/698	Same as above
SR 2N7471T1	C	3B				
SR 2N7475T1	C	3B			/685	
SF 2N7476T1	C	3B				
SR 2N7477T1	C	3B				
SR 2N7478T1	C	3B			/697	
SF 2N7523T1	C	3A			/733	
SF 2N7524T1	C	3A				
SF 2N7549T1	C	3A			/713	
SR 2N7550T1	C	3A				

Plant (1): HEXFET America  
 41915 Business Park Dr.  
 Temecula, CA 92590  
 (Wafer Fabrication)

6/ Testing is compliant to the latest revision of MIL-STD-750 Test Method 1020.3


S Includes JANS quality level only

This qualification approval is based upon the test report number 19500-4149-14 for your package, your letter dated February 26, 2014, your QCI data (groups A, B, C, D, E1 and E4) and subsequent emails and data. This qualification is subject to the conditions as stated in the SD-6 and DOD 4120.24M.

Because we are held responsible for the accuracy and currency of this Qualified Manufacturers List, please let us know if your company discontinues production of these products. Also, manufacturers are required to inform this office immediately after learning of a potential issuance of a GIDEP alert, problem advisory, or other problem notification on their QML product.

If you have any questions concerning this letter, please contact Mr. Carl DelloStritto (614) 692-0616.

Sincerely,

  
 JOSEPH GEMPERLINE  
 Chief  
 Sourcing and Qualifications Division

Federal Recycling Program  Printed on Recycled Paper