PCN Report

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Products : MS0690J-DL1TE SOT-227 Package
Revision : A

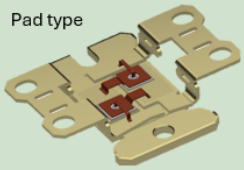
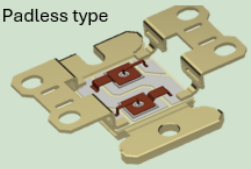
1.0 Objective:

This qualification report covers assembly location transfer for MS0690J-DL1TE SOT-227 package.

2.0 Applicable Products:

Thyristor MS0690J-DL1TE SOT-227 Package**.**

3.0 Bill of Materials Changes:

DIRECT MATERIALS	OLD ASSEMBLY SITE	NEW ASSEMBLY SITE	CHANGE, Y/N	REMARKS
Lead Frame	Pad type 	Padless type 	Y	Padless type is widely used for other SOT-227 package part numbers and is considered as a process improvement during the transfer.
Ceramic Material/ Thickness	Aluminum Nitride/ 0.635 mm	Alumina/ 0.25 mm	Y	This change does not impact the isolation strength of the material, which remains in accordance with the parameters outlined in the datasheet.
Solder Material	95.5Pb 2Sn 2.5Ag - Solder 96.5Sn 3Ag 0.5Cu – Paste	95.5Pb 2Sn 2.5Ag - Solder	Y	In line with the transition to padless type and a simplified single pass soldering process

4.0 Electrical Parameter Test Result

Package	Part Number	Blocking Voltage	Forward Voltage	Reverse Current	Forward Current	Gate Trigger Current	Gate Trigger Voltage	Peak On-State Voltage	Holding Current
SOT227	MS0690J-DL1TE	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

5.0 Qualification Test Result

All samples passed parametric and reliability test standard by Littelfuse/IXYS.

DEVICE	REL - TEST	CONDITIONS	SAMPLE SIZE PER LOT, pc	REMARKS	RESULT
SOT-227 MS0690J-DL1TE	HTRB	1008hrs, 125°C	10	passed	Completed; Passed reliability
	T/C	100 cycles, -40°C/150°C	20	passed	Completed; Passed reliability
	uHAST	96 hrs, 130°C, 85% RH	20	passed	Completed; Passed reliability
	P/C	10000 cycles, Delta T 80°C, 125°C	10	passed	Completed; Passed reliability

6.0 Recommendations & Conclusions:

Based on the above qualification tests results, Littelfuse/IXYS has determined that the SBU Lipa Assembly Location meets the release criteria and is ready to start mass production of the affected products.