



## MSL Test Summary

JESD22-A113

**PURPOSE:** This Test Method establishes an industry standard preconditioning flow for nonhermetic solid state SMDs (surface mount devices) that is representative of a typical industry multiple solder reflow operation. These SMDs should be subjected to the appropriate preconditioning sequence of this document by the semiconductor manufacturer prior to being submitted to specific inhouse reliability testing (qualification and reliability monitoring) to evaluate long term reliability (which might be impacted by solder reflow).

\*NOTE Correlation of moisture-induced stress sensitivity (per J-STD-020 and JESD22-A113) and actual reflow conditions used are dependent upon identical temperature measurement by both the semiconductor manufacturer and the board assembler. Therefore, it is recommended that the top of package temperature on the hottest moisture-sensitive SMD during assembly be monitored to ensure that it does not exceed the temperature at which the components are evaluated.

### Test Results

Part	Description	Condition	Sample Size	Date	Results
MT3-0113LCQG-2 with Ceramic Package	MMIC T3 COTS Mixer RF 1.5 - 13	MSL 1	8	7/26/18	Pass
MT3-0113LCQG-2 with Ceramic Package	MMIC T3 COTS Mixer RF 1.5 - 13	MSL 3	22	7/10/18	Pass
MT3-0113LCQG-2 with Ceramic Package	MMIC T3 COTS Mixer RF 1.5 - 13	MSL 3	22	9/24/18	Pass
MT3-0113LCQG-2 with Ceramic Package	MMIC T3 COTS Mixer RF 1.5 - 13	MSL 3	24	10/30/18	Pass

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Passing MSL units with ceramic package (unit is neither warped or bowed):

