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Moisture Sensitivity Level (MSL) Summary

Cage Code	SIZE	Version			
OUC32	A	#	Description	Date	Approved
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051-07132		1.1	Added more part number	9/14/22	MZ
Test Summary		1.0	Changed format and to Docuware versioning	7/27/20	MG

1. Purpose and Scope

This test method establishes an industry standard preconditioning flow for non-hermetic 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).

2. Reference

J-STD-020 Moisture Reflow Sensitivity Classification for Surface Mount Electronics

3. Test Results

Part	Description	Condition	Sample Size	Date	Results
T3-07LCQG-1	T3 MIXER RF 1-7000MHz +15dBm	MSL 1	20	3/2/22	Pass
MT3L-0113LCQG	MMIC T3 COTS Mixer RF 1.5 – 13 GHz	MSL 1	22	10/5/21	Pass
BAL-0020SLG	Broadband Balun 10MHz – 20GHz	MSL 1	16	10/27/20	Pass
BAL-0003SMG	Broadband Balun 500 kHz - 3 GH	MSL 1	16	12/16/19	Pass
MEQx-xxASM	MMIC Equalizers	MSL 1	100	10/1/19	Pass
T3A-07SMG-2	T3A MIXER with integrated amp	MSL 3	13	8/19/19	Pass
T3A-07SMG-2	T3A MIXER with integrated amp	MSL 2	22	8/19/19	Pass
AMM-6702SM	MMIC Broadband LO Buffer AMP	MSL 2	9	7/30/19	Pass
AMM-6702SM	MMIC Broadband LO Buffer AMP	MSL 1	10	7/9/19	Pass
BT-0010SMG-2	Bias Tee 20 MHz to 10 GHz	MSL 1	22	6/24/19	Pass
MT3-0113SCQG-2	MMIC triple balanced mixer	MSL 2	6	6/7/19	Pass
MT3-0113QCQG-2	MMIC triple balanced mixer	MSL 2	6	6/7/19	Pass
MM1-1850HSM-2	MMIC Mixer RF 18 - 50 GHz	MSL 1	17	4/2/19	Pass
MEQ5-20ASM	MMIC Equalizer 20 GHz 5 dB	MSL 2	14	1/16/19	Pass
MEQ3-20ASM	MMIC Equalizer 20 GHz 3 dB	MSL 2	14	1/16/19	Pass
MEQ12-7ASM	MMIC Equalizer 7 GHz 12.5 dB	MSL 2	18	1/16/19	Pass
MEQ10-14ASM	MMIC Equalizer 14 GHz 10 dB	MSL 2	18	1/16/19	Pass
MEQ6-14ASM	MMIC Equalizer 14 GHz 6 dB	MSL 2	18	1/16/19	Pass
MEQ3-14ASM	MMIC Equalizer 14 GHz 3 dB	MSL 2	18	1/16/19	Pass
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

*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.