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# UFAST Summary

| Cage Code        | SIZE | Version |   |          |          |
|------------------|------|---------|---|----------|----------|
| OUC32            | A    | #       | Description                               | Date     | Approved |
| Document No.     |      | 1.2     | Add to Docuware                           | 09/14/22 | JCG      |
| <b>051-06894</b> |      | 1.1     | Added more part numbers                   | 09/14/22 | MZ       |
| Test Summary     |      | 1.0     | Changed format and to Docuware versioning | 12/24/19 | MG       |

## 1. Purpose and Scope

The Unbiased HAST is performed for the purpose of evaluating the reliability of non-hermetic packaged solid-state devices in humid environments. It is a highly accelerated test that employs temperature and humidity under noncondensing conditions to accelerate the penetration of moisture through the external protective material (encapsulant or seal) or along the interface between the external protective material and the metallic conductors that pass through it. Bias is not applied in this test to ensure the failure mechanisms potentially overshadowed by bias can be uncovered (e.g., galvanic corrosion). This test is used to identify failure mechanisms internal to the package and is destructive.

## 2. Reference

JESD22-A118

UNBIASED HIGHLY ACCELERATED TEMPERATURE AND HUMIDITY STRESS TEST (UFAST)

## 3. Test Results

| Part Type       | Description                               | Test Condition          | Sample Size | Date     | Results |
|-----------------|---|-------------------------|-------------|----------|---------|
| MT3L-0113LCQG   | MMIC T3 COTS Mixer RF 1.5 – 13 GHz        | 105°C, 85%RH for 352Hrs | 5           | 10/7/21  | Pass    |
| T3-07LCQG-1     | T3 MIXER RF 1-7000 MHz +15 dBm            | 105°C, 85%RH for 352Hrs | 7           | 3/24/22  | Pass    |
| MM1-0330TS      | MMIC High Linearity Double Balanced Mixer | 110°C, 85%RH for 264Hrs | 6           | 11/9/21  | Pass    |
| T3A-07SMG-2     | T3A Mixer with integrated amp             | 105°C, 85%RH for 352Hrs | 3           | 10/14/19 | Pass    |
| AMM-6702SM      | MMIC Broadband LO Driver AMP              | 105°C, 85%RH for 352Hrs | 3           | 7/8/19   | Pass    |
| MM1-1850HSM-2   | MMIC Mixer RF 18 - 50 GHz                 | 105°C, 85%RH for 352Hrs | 3           | 5/3/19   | Pass    |
| BT-0010SMG-2    | SM Bias Tee 10GHz                         | 105°C, 85%RH for 352Hrs | 5           | 5/6/19   | Pass    |
| MEQ3-14ASM      | MMIC Equalizer 14 GHz 3dB                 | 105°C, 85%RH for 352Hrs | 2           | 3/12/19  | Pass    |
| MEQ6-14ASM      | MMIC Equalizer 14 GHz 6dB                 | 105°C, 85%RH for 352Hrs | 2           | 3/12/19  | Pass    |
| MEQ10-14ASM     | MMIC Equalizer 14 GHz 10dB                | 105°C, 85%RH for 352Hrs | 2           | 3/12/19  | Pass    |
| MEQ12-7ASM      | MMIC Equalizer 7 GHz 12.5dB               | 105°C, 85%RH for 352Hrs | 8           | 3/12/19  | Pass    |
| MEQ3-20ASM      | MMIC Equalizer 20 GHz 3dB                 | 105°C, 85%RH for 352Hrs | 2           | 3/12/19  | Pass    |
| MEQ5-20ASM      | MMIC Equalizer 20 GHz 5dB                 | 105°C, 85%RH for 352Hrs | 2           | 3/12/19  | Pass    |
| BT-0014SMG-1    | SM Bias Tee 14GHz                         | 105°C, 85%RH for 352Hrs | 21          | 3/7/19   | Pass    |
| PD-0010         | Power Divider DC – 10GHz                  | 105°C, 85%RH for 352Hrs | 1           | 3/7/19   | Pass    |
| PD-0020G        | Power Divider DC – 20GHz                  | 105°C, 85%RH for 352Hrs | 1           | 3/7/19   | Pass    |
| MT3-0113LCQG    | MMIC T3 Mixer RF 1.5 - 13                 | 130°C, 85%RH for 96Hrs  | 24          | May 2018 | Pass    |
| MM1-1140H       | MMIC Mixer RF 11 - 40 GHz +15             | 130°C, 85%RH for 96Hrs  | 5           | May 2018 | Pass    |
| M1-0420LA       | Mixer RF 4-20 GHz +7 dBm A pkg            | 130°C, 85%RH for 96Hrs  | 3           | May 2018 | Pass    |
| M1-0420HA       | Mixer RF 4-20 GHz +16 dBm A pkg           | 130°C, 85%RH for 96Hrs  | 3           | May 2018 | Pass    |
| T3-08LCQG       | T3 MIXER RF 10-8000 MHz +15 dB            | 130°C, 85%RH for 96Hrs  | 24          | Mar 2017 | Pass    |
| ADM-0126-5928SM | MMIC Amplifier                            | 130°C, 85%RH for 96Hrs  | 20          | Aug 2016 | Pass    |