

Product Qualification Report

BFQ19S

Low Noise Silicon Bipolar RF Transistor

Description

This product qualification report describes the characteristics of the product with respect to quality and reliability.

The qualification sample selection was done on production lots which were manufactured and tested on standard production processes and meet the defined requirements.

The qualification test results of those products as outlined in this document are based on **AECQ101** for target applications and may reference existing qualification results of similar products. Such referencing is justified by the structural similarity of the products.

Qualification Assessment

Qualified acc. **AEC Q101** and assessed as PASS

For further information about comparable products, please contact the nearest Infineon Technologies office (www.infineon.com).

BFQ19S
Package: PG-SOT89-4
MSL: 1

qualified before 2010

Electrical Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/ss | Fail/Qty | Result |
|--|-------|---------------------------------|----------|---------|----------|--------|
| Electrical Distribution | ED | -55°C, +25°C, +150°C | | 1 x 30 | 0 / 30 | PASS |
| High Humidity High Temperature Reverse Bias JESD22 A101 | H3TRB | T=85°C, RH=85% | 1000 h | 4 x 60 | 0 / 240 | PASS |
| High Temperature Reverse Bias JESD22 A108 | HTRB | Ta=150°C | 1000 h | 4 x 60 | 0 / 240 | PASS |
| Intermittend Operating Life MIL-STD-750 Method 1037 | IOL | Tj=175°C Cycle time: 2min | 1000 h | 4 x 60 | 0 / 240 | PASS |
| ESD (HBM) AEC Q101-001 | HBM | ESD class 1C | | 1 x 10 | 0 / 10 | PASS |

Environmental Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|-------|---------------------------------|----------|---------|----------|--------|
| Preconditioning J-STD020 / JESD22 A113 | PC | Soak acc.MSL1, 3x reflow, 260°C | | 4 x 240 | 0 / 960 | PASS |
| Temperature Cycling JESD22 A104 | TC | -55°C to +150°C | 1000 cyc | 4 x 60 | 0 / 240 | PASS |
| Autoclave JESD22 A102 | AC | Ta=121°C, RH=100% | 96 h | 4 x 60 | 0 / 240 | PASS |

Mechanical Stress Test Results:

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|-------|---|----------|---------|----------|--------|
| Destructive Physical Analysis | DPA | Random samples from H3TRB & TC | | 4 / 2 | 0 / 8 | PASS |
| Physical Dimensions JESD B-100 | PD | | | 1 / 30 | 0 / 30 | PASS |
| Resistance to Solder Heat JESD B-106 | RTSH | Solder bath Ts=260°C, dip 3 x 10 sec | | 1 / 30 | 0 / 30 | PASS |
| Solderability J-STD-002 | SD | | | 1 / 10 | 0 / 10 | PASS |

Notes:

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Edition 2016-01-22

Published by

Infineon Technologies AG
81726 München, Germany

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Document reference

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