# Product Qualification Report

# BGC100GN6

Switchable Wideband Directional Coupler IC

## 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 **JEDEC** 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

Fully qualified according to **JEDEC** for **Industrial Applications** and assessed as PASS

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

**BGC100GN6** **qualified since 2017**
**Package: PG-TSNP-6**
**MSL: 1**

**Electrical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/ss | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Electrical Distribution | ED | -40°C, +25°C, +85°C | | 3 x 10 | 0 / 30 | PASS |
| High Temperature Operating Live JESD22 A101 | HTOL | Tj=150°C Vdd=Vddmax | 1000 h | 3 x 77 | 0 / 231 | PASS |
| High Temperature Strorage JESD22 A103 | HTSL | Ta=150°C | 1000 h | 3 x 45 | 0 / 135 | PASS |
| Early Life Failure Rate Study | ELFR | Tj=150°C Vdd=Vddmax | 48 h | 3 x 1000 | 0 / 3000 | PASS |
| ESD HBM JESD22-A114B / JS-001 | HBM | HBM 1C 1000V to < 2000V | | 1 x 3 | 0 / 3 | PASS |
| ESD CDM JESD22-C101 / JS-002 | CDM | CDM C3 ≥ 1000V | | 1 x 3 | 0 / 3 | 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 | | 3 x 50 | 0 / 150 | PASS |
| Temperature Cycling JESD22 A104 | TC | -55°C to +150°C | 1000 cyc | 3 x 25 | 0 / 75 | PASS |
| HAST JESD22 A101 | HAST | Ta=130°C, RH=85% Vdd=Vddmax | 96 h | 3 x 25 | 0 / 75 | PASS |
| uHAST JESD22-A118 | uHAST | Ta=130°C, RH=85% | 96h | 3 x 25 | 0 / 75 | PASS |

**Mechanical Stress Test Results:**

| Test Description | Abbr. | Condition | Duration | Lots/SS | Fail/Qty | Result |
|---|---|---|---|---|---|---|
| Physical Dimensions JESD B-100 | PD | | | 1 x 30 | 0 / 30 | PASS |
| Solderability J-STD-002 | SD | | | 3 x 22 | 0 / 66 | PASS |

**Notes:**

**Trademarks**
All referenced product or service names and trademarks are the property of their respective owners.

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**Document reference**

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