

# Product Qualification Report

## 产品质量和可靠性鉴定报告

### FS55MR12W1M1H\_B11

EasyPACK™ 1B

#### Description

This product qualification report describes the characteristics of the product with respect to quality and reliability. 该鉴定报告描述了关于质量和可靠性方面的产品特性。

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

用于鉴定的样本采自常规的产线批次，这些批次的产出需经过标准的制造和测试工艺流程并且符合所定义的规范要求。

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

本文中所概述的产品质量和可靠性测试结果是基于符合目标应用所对应的IEC标准，并且可能参考类似产品所现有的鉴定测试结果。该参考的实行是基于对产品之间的结构相似性的证明。

#### Qualification Assessment

Qualified according to **IEC Standard** and assessed as PASS

#### 鉴定评估结果

依照IEC标准，鉴定评估结果合格。

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

有关同类产品的进一步信息，请向就近的英飞凌办事处联系咨询。 ([www.infineon.com](http://www.infineon.com)).

## FS55MR12W1M1H\_B11 EasyPACK™ 1B

Part of family qualification for:

鉴定结果包含以下同类型产品品名

FSxxMR12WxM1H(P)(\_B11)

(Wx = W1, W2,W3)

Test Description 测试项描述	Abbr. 测试项缩写	Condition 测试条件	Devices 样本数量	Result 测试结果
High Temperature Reverse Bias IEC 60747-9 *) 高温反向偏置试验 IEC 60747-9 *)	HTRB	1.000 h $V_{CE} = 0,9 \times V_{CES} (DC)$ $V_{CE} = 1.080 V$ $T_{vj} = T_{vj\ op\ max}$	≥ 72 dies	PASS
High Temperature Gate Stress IEC 60747-9 *) 高温栅极应力试验 IEC 60747-9 *)	HTGS	1.000 h $V_{GE} = - 20 V / + 23 V (DC)$ $T_a = T_{vj\ op\ max}$	≥ 72 dies	PASS
High Humidity High Temperature Reverse Bias IEC 60749-5 *) 高温、高湿反向偏置试验 IEC 60749-5 *)	H3TRB	1.000 h $T_a = 85\ ^\circ C; RH = 85\%$ $V_{CE} = 80 V (DC)$	≥ 72 dies	PASS
High Voltage High Humidity High Temperature Reverse Bias IEC 60749-5 *) 高压、高湿、高温反向偏置试验 IEC 60749-5 *)	HV-H3TRB	1.000 h $T_a = 85\ ^\circ C; RH = 85\%$ $V_{CE} = 960 V (DC)$	≥ 72 dies	PASS
Alternating Current and Humidity/ Temperature Cycling Test Internal Guideline 交流電和濕度/溫度循環測試 內部指南	AC-HTC	21 d $T_{cycle} = -20\ ^\circ C / 85\ ^\circ C$ $RH = 93\%$ $V_{DS} = \text{typical } V_{DC,link}$ $f = \text{typical application frequency}$	≥ 16 dies	PASS
Power Cycling [sec.] IEC 60749-34 功率循环试验 [秒] IEC 60749-34	PC	25.000 Cycles $\Delta T_{vj} = 80 K$ $T_{vj\ max} = 150\ ^\circ C$	≥ 6 modules	PASS
Thermal Shock Test (two chamber) IEC 60749-25 热冲击试验 (两个腔体) IEC 60749-25	TST	50 Cycles $T_a = -40\ ^\circ C \text{ to } + 125\ ^\circ C$	≥ 6 modules	PASS

Vibration (Sine Sweep) IEC 60068-2-6 *) 振动试验 (正弦波扫描) IEC 60068-2-6 *)	VIB	5 h each direction (x, y, z) f = 5...200 Hz f1 = 5...13 Hz: A = 7,5 mm (const.) f2 = 13...200 Hz: a = 50 m/s <sup>2</sup> v = 1 Octave/min.	≥ 6 modules	PASS
ESD-Level (HBM) JEDEC/ANSI/ESDA (JS-001) AEC-Q100-002 ESD 试验 (HBM) JEDEC/ANSI/ESDA (JS-001) AEC-Q100-002	ESD	R = 1.5 kΩ; C = 100 pF	≥ 3 devices	Class 1C 1.000 V to < 2.000 V

**Notes:**

\*) Standards are taken as a reference; slight variations from the standards according to Infineon regulations may occur.

**注释:**

\*) 标准的采用作为参考; 英飞凌的规范较国际标准可能会出现轻微差异。

T<sub>vj,op</sub> > 150°C is allowed for operation at overload conditions for MOSFET and body diode. For detailed specifications, please refer to AN 2021-13.