Product Qualification Report

FF450R12KT4P

62 mm

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 **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.

Qualification Assessment

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

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

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Part of family qualification for:

FZxxxR12KP4(P), FZxxxR12KE4(P), FFxxxR12KE4(P), FFxxxR12KT4(P)
FFxxxR12KE4_E, FDxxxR12KE4(P)

Test Description	Abbr.	Condition	Devices	Result
High Temperature Reverse Bias IEC 60747-9 *)	HTRB	1.000 h V_{CE} = 0,9 x V_{CES} (DC) V_{CE} = 1.080 V T_{vj} = $T_{vj\ op\ max}$	≥ 72 dies	PASS
High Temperature Gate Stress IEC 60747-9 *)	HTGS	1.000 h V_{GE} = ±20 V (DC) T_a = $T_{vj\ op\ max}$	≥ 72 dies	PASS
High Humidity High Temperature Reverse Bias IEC 60749-5 *)	H3TRB	1.000 h T_a = 85 °C; RH = 85% V_{CE} = 80 V (DC)	≥ 72 dies	PASS
Power Cycling [sec.] IEC 60749-34	PC	100.000 Cycles ΔT_{vj} = 80 K $T_{vj\ max}$ = $T_{vj\ op\ max}$	≥ 6 modules	PASS
Thermal Cycling (passive test) Internal Guideline	TC	5.000 Cycles ΔT_C = 80 K	≥ 12 modules	PASS
Thermal Shock Test (two chamber) IEC 60749-25	TST	50 Cycles $T_{a\ =}$ -40 °C to + 125 °C	≥ 12 modules	PASS
Vibration (Sine Sweep) 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/s² v = 1 Octave/min.	≥ 12 modules	PASS
ESD-Level (HBM) JESD22-A114	HBM	R = 1.5 kΩ; C = 100 pF	≥ 3 modules	Class 2 2.000 V to < 4.000 V

Notes:

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

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Do you have a question about this document?

Email: erratum@infineon.com

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