Product Qualification Report

IFF2400P17AE4

MIPAQ™ Pro

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).

IFF2400P17AE4
MIPAQ™ Pro

Part of family qualification for:

IFFxxxPxxLE4, IFFxxxPxxAE4

Test Description	Abbr.	Condition	Devices	Result
High Humidity High Temperature Reverse Bias IEC 60749-5 *)	H3TRB	1.000 h T_a = 85 °C; RH = 85% V_{CE} = 80 V (DC) $V_{controlboard}$ = 24 V	≥ 3 IPMs	PASS
Thermal Shock Test (two chamber) IEC 60749-25	TST	100 Cycles $T_{a=}$ -40 °C to + 105 °C	≥ 3 IPMs	PASS
Low Temperature Storage IEC 60721-3-1	LTS	1.000 h $T_{a=}$ -40 °C	≥ 3 IPMs	PASS
High Temperature Operating Stress IEC 60068-2-2	HTOS	1.000 h $T_{a=}$ 85 °C $V_{controlboard}$ = 24 V F_{sw} = 1 kHz	≥ 3 IPMs	PASS
Vibration (Sine Sweep) IEC 60068-2-6 *)	VIB	5 h each direction (x, y, z) f = 5…500 Hz f1 = 5…9 Hz: A = 7,5 mm (const.) f2 = 9…200 Hz: a = 20 m/s² f3 = 200…500 Hz: a = 40 m/s² v = 1 Octave/min.	≥ 3 IPMs	PASS
Vibration (Shock Test) IEC 60068-2-27 *)	VIB	18 shocks; 3 in each direction (±X, ±y, ±z) a = 300 m/s² (peak) t = 11 ms	≥ 3 IPMs	PASS
Immunity test to radiated, radio-frequency, electromagnetic fields EN 61000-4-3	IM-EF	Frequency 80 MHz – 1 GHz 10 V/m 80 % AM (1 kHz) Dwell time: 2 s	≥ 3 IPMs	PASS
Immunity test to conducted disturbances, induced by radio-frequency fields EN 61000-4-6	IM-RF	Frequency 150 kHz – 80 MHz 10 V 80 % AM (1 kHz) Dwell time: 2 s	≥ 3 IPMs	PASS
Immunity test to power frequency magnetic field EN 61000-4-8	IM-MF	Magnetic field 50 Hz / 60 Hz 30 A/m	≥ 3 IPMs	PASS
Immunity test to electrical fast transients (Burst) EN 61000-4-4	IM-FT	AC/DC ports Burst frequency: 2,5 kHz Test voltage: +/- 4 kV I/O Ports Burst frequency: 5 kHz Test voltage: +/- 2 kV	≥ 3 IPMs	PASS
Immunity test to electrostatic discharge EN 61000-4-2	IM-ED	Contact discharge: +/- 6 kV Discharge network: 2 kΩ / 150 pF	≥ 1 IPMs	PASS
UL Underwriters Laboratories Inc. UL61800-5-1	UL	Adjustable Speed Electrical Power Drive Systems Safety Requirements: Electrical, Thermal and Energy	≥ 1 IPMs	PASS

Notes:

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

For test overview on IGBT module level consider the QPAC of "FF600R17ME4P_B11" (EconoDUAL3).

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Document reference

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