Product Qualification Report (PQR)

CY62146G30-45BVXI

Package: PG-VFBGA-48

All reliability stress tests according to JEDEC JESD 47 are assessed as PASS. The data outlined in this document may reference existing qualification results of similar products.

Table 1 Reliability stress tests

Test description	Abbr.	Condition	Duration	Min. # of Lots × sample size	Result
Accelerated lifetime simulation tests for device qualification					
High temperature operating life *JESD22-A108, JESD85*	HTOL	125°C Vmax	1000 h	3 × 77	Pass
Early life failure rate *JESD22-A108, JESD74*	ELFR	125°C Vmax	48 h	3 × 800	Pass
Non-volatile memory cycling endurance *JESD22-A117*	NVCE	For NVM products only			n.a
Data retention *JESD22-A117*	DR	For NVM products only			n.a
Low temperature operating life *JESD22-A108*	LTOL	Covered by wafer technology qualification			Pass

Test description	Abbr.	Condition	Duration	Min. # of Lots × sample size	Result
Accelerated environment stress tests for devices in non-hermetic packages					
High temperature storage life *JESD22-A103*	HTSL	150°C	1000 h	3 × 25	Pass
Preconditioning *JESD22-A113, J-STD-20 (MSL)*	PC	MSL 3	3 × reflow 260°C	Before HAST, uHAST, TC	Pass
Highly accelerated temperature and humidity stress *JESD22-A110*	HAST	110°C 85% RH Vmax	264 h	3 × 25	Pass
Unbiased highly accelerated temperature and humidity stress *JESD22-A118*	UHAST	130°C 85% RH	96 h	3 × 25	Pass
Temperature cycling *JESD22-A104*	TC	-65°C to 150°C	500×	3 × 25	Pass

Test description	Abbr.	Comment	Result
Electrical verification tests			
Electrical parameter assessment	ED	test at room, hot, cold temperature	Pass
ESD human body model *JS-001*	ESD HBM	Class 2 (2000 V to < 4000 V)	Pass
ESD charged device model[1)] *JS-002*	ESD CDM	Class C2a (500 V to < 750 V)	Pass
Latch-up *JESD78*	LU	Class II.A	Pass

[1)] voltage refers to test condition (TC) mentioned in the standard

Test description	Abbr.	Comment	Result
Soft error rate *JEDEC JESD89-1 (un-accelerated)* *JEDEC JESD89-2/-3 (accelerated)*	SER	Covered by wafer technology qualification	Pass
Package assembly integrity tests for devices in non-hermetic packages			
Solder ball shear *JESD22-B117*	SBS	Covered by package platform qualification and production monitoring	Pass
Wire bond pull *JESD22-B120*	BPS	Covered by package platform qualification and production monitoring	Pass
Bond shear *JESD22-B116*	BS	Covered by package platform qualification and production monitoring	Pass
Solderability *J-STD-002*	SD	Covered by package platform qualification and production monitoring	Pass
Tin whisker *JESD22-A121, requ. of JESD201*	WSR	Only for Sn surface finishes	n.a

For further information and documentation please refer to the product homepage:
https://www.infineon.com/part/CY62146G30-45BVXI

Do you have a question about any aspect of this document?
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