RELIABILITY TEST RESULT

Product name : S-817BxxAY-x2-U
Package type : TO-92

No.	Test item	Test Condition	Test Time	r/n	Criterion
1	High-temperature operation	Ta=125 °C, V=Vopr max.	1000 h	0/22	Satisfies the product standard
2	Temperature humidity bias [#1]	Ta=85 °C, RH=85 %, V=Vopr max.	1000 h	0/22	Satisfies the product standard
3	Pressure cooker bias [#1]	Ta=125 °C, RH=85 %, P=2×10^5 Pa V = Vopr max.	100 h	0/22	Satisfies the product standard
4	Storage in high temperature	Ta=150 °C	1000 h	0/22	Satisfies the product standard
5	Storage in low temperature	Ta=−65 °C	1000 h	0/22	Satisfies the product standard
6	Temperature Cycle (Gas phase) [#1]	Ta=150 °C ⇔ −65 °C 15 minutes for each	500 cycles	0/22	Satisfies the product standard
7	Resistance to soldering heat -1 (Soldering Iron) [#2]	T=380 °C , 5 s (Soldering iron tip temperature) Object : terminal parts	2 times	0/22	Satisfies the product standard No abnormality by appearances
8	Resistance to soldering heat -2 (Flow soldering) [#2]	T=260 °C ,10 s	1 time	0/22	Satisfies the product standard No abnormality by appearances
9	Solderability [#3]	T=245 °C Solder material : Sn-3.0Ag-0.5Cu	5 s	0/11	Zero cross time should be less than 3 seconds. Solder should be applied at 95% or more of solderability judgment area.
10	Solder Joint Reliability (shear test) [#3]	Ta=125 °C ⇔ −40 °C Solder material : Sn-3.0Ag-0.5Cu	2000 cycles	0/22	After temperature cycle test, keep strength for shear stress more than the 50 % of initial mean value.
11	Terminal Strength (Pull test)	Pull force : 10N	30 s	0/11	Terminal is not taken off
12	Terminal Strength (Bending test)	Load : 5N, 90degree Bend a lead	2 times	0/11	Terminal is not taken off
13	ESD - 1 (Human Body Model)	V=±2000 V, C=100 pF, R=1.5 kΩ Ground : V_{IN} / Vss	5 pulses	0/5	Satisfies the product standard
14	ESD - 2 (Charged Device Model)	V=±500V charged, discharged	1 pulse	0/5	Satisfies the product standard
15	Latch up (Pulsed current injection test)	±100 mA, V =Vopr max.	1 pulse	0/5	No latch up

Remark : Vopr max. =Maximum operation voltage
 #1,2,3 : Each test designated # is performed after Pre-Treatment finished.
         Pre-Treatment consists of High Temperature Storage ,Temperature Humidity
         Storage and Soldering Heat. (See the table below.)

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Pre Treatment (#1)		
High Temp. Storage	Temperature Humidity Storage	Soldering Heat
Ta=125 °C t=24 h	Ta=85 °C RH=85 % t=168 h	Reflow 3 times T=260 °C t=10 s

Pre Treatment (#2)		
High Temp. Storage	Temperature Humidity Storage	Soldering Heat
Ta=125 °C t=24 h	Ta=85 °C RH=85 % t=168 h	—

Pre Treatment (#3)		
High Temp. Storage	Temperature Humidity Storage	Soldering Heat
—	Ta=105 °C RH=100 % t=8 h	—

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