RELIABILITY TEST DATA

Product name : S-8252xx-I6TxU
Package type : SNT-6A

No.	Test item	Test Condition	Test Time	r/n
1	High Temperature Bias	Ta=125 °C V_{DD} =Vabs max.×0.9	1000 h	0/22
2	#1 Temperature Humidity Bias	Ta=85 °C RH=85 % V_{DD} =Vabs max.×0.9	1000 h	0/22
3	#1 Un-saturated Pressure Cooker Bias	Ta=125 °C RH=85 % P=2×10^5 Pa V_{DD} =Vabs max.×0.9	100 h	0/22
4	High Temperature Storage	Tstg max.=150 °C	1000 h	0/22
5	Low Temperature Storage	Tstg min.=–65 °C	1000 h	0/22
6	#1 Temperature Cycle (Gas phase)	Tstg max.=150 °C ⇔ –65 °C (30 min each)	200 cycles	0/22
7	#1 Thermal Shock (Liquid phase)	Tstg max.=150 °C ⇔ –65 °C (5 min each)	100 cycles	0/22
8	#1 Resistance to soldering heat - 1 (reflow)	T=260 °C ,10 s	3 times	0/22
9	#1 Resistance to soldering heat - 2 (Solder iron)	T=380 °C , 5 s	Twice	0/22
10	#2 Solderability	T=230 °C Solder material ; Sn-3.0Ag-0.5Cu	3 s	0/11
11	Whisker - 1 (Room Temperature Storage)	Ta=25±3 °C RH=40～70% criteria ; Whisker should be less than 50μm	3 months	0/10
12	Whisker - 2 (Temperature Cycle)	Tstg max.=85 °C ⇔ –40 °C (30 min each) criteria ; Whisker should be less than 50μm	1000 cycles	0/10
13	Whisker - 3 (Temperature Humidity Storage)	Ta=60 °C RH=93 % criteria ; Whisker should be less than 50μm	2000 h	0/10
14	Solder Joint Reliability (Temperature Cycle + shear test)	Tstg max.=125 °C ⇔ –40 °C (30 min each) Solder material ; Sn-3.0Ag-0.5Cu criteria ;After temperature cycle test, keep strength for shear stress more than the 50 % of initial mean value.	2000 cycles	0/5
15	ESD - 1 (Human Body Model)	V=±2000 V C=100 pF R=1.5 kΩ Ref. To V_{DD} / Vss (5units for each direction)	5 pulses	0/20
16	ESD - 2 (Machine Model)	V=±200 V C=200 pF R=0 Ω Ref. To V_{DD} / Vss (5units for each direction)	3 pulses	0/20
17	Latch Up	±100 mA (V_{CLAMP} = Vopr max.) 10 ms pulse V_{DD} =Vopr max.	1 pulse	0/5

Remark : Vabs max. = Absolute maximum voltage , Vopr max. =Maximum operation voltage
: 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.)

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	Infrared 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=105 °C RH=100 % t=8 h	—