SEMIWARE

Reliability Test Reference Table

SMWE-QC-006-B1

No.	Test Item	Condition	Reference	Test time	Scope
1	Pre-conditioning	Performed on surface mount devices (SMDs) prior to TC,AC, H3TRB/HAST & IOL/PTC stresses only.	JESD22A-113	1.Temperature Cycling:-40℃~60℃, 5cycles; 2.Bake:125℃,24H; 3.Moisture Soak:85±2℃, 85±5%/168h; 4.Reflow*3cycles:260℃,3cycles time 5-60min	Only For SMD Series
2	High Temperature Reverse Bias	Tjmax,80%VR (Zener 100%Vz,TVS 100%Vrwm) Tjmax,100%VR(Only For AECQ)	JESD22-A108	1000Hrs	All Series
3	High Temperature Gate Bias	Tjmax,100%Vgs	JESD22-A108	1000Hrs	Only For MOS
4	Intermittent Operational Life	△Tj⩾100℃,2min ON/2min OFF	MIL-STD-750 Method 1037	15000Cycles	Except for TVS&Zener Series
5	High-temperature High-humidity Reverse Bias	85±2℃, 85%±5%RH, 80%VR (Max=100V)	JESD22-A101	1000Hrs	All Series
6	Highly Accelerated Stress Test	130±2℃, 85%±5%RH 80%VR (Max=42V)	JESD22-A101	96Hrs	All Series
7	High-temperature High-humidity storage test	85±2℃, 85±5%RH	MIL-STD-202F METHOD-103B	1000Hrs	All Series
8	Temperature Cycling	150℃ (+15, -0) /15min, -55℃ (+0, -10) /15min	JESD22-A104	1000 cycles	All Series
9	High Temperature Storage	150℃ (+10, -0)	JESD22-A103	1000Hrs	All Series
10	Low Temperature storage	-55℃	Specification	1000Hrs	All Series
11	Auto-clave	121℃±2℃,15 psig,100%RH	JESD22-A102	96Hrs	All Series
12	Salt Spray Test	35±2℃, 5±0.1%, 6.5-7.2, 1~2ml/80cm^2.h	GB/T 2423.17-2008	24Hrs	All Series
13	Solderability	235℃±5℃	J-STD-002	3Sec	All Series
14	Resistance to solder heat	DIP：270±5℃ SMD: 260℃(+5,-0)	JESD22-B106 JESD22-A111	DIP：7sec(+2, -0) SMD :10sec	All Series
15	Bending Strength	ϕ0.6mm~0.78mm,W=0.5Kg,90±5° ＞ϕ1.2mm,W=2Kg,90±5°	MIL-STD-750 Method 2036	3Times	Axial Series
16	Terminal Strength	ϕ0.6mm~0.78mm,W=1Kg ＞ϕ1.2mm,W=3Kg	MIL-STD-750 Method 2036	15Sec	Axial Series
17	Forward Surge Test	8.3ms,Single,Half-Wave	MIL-STD-750 Method 4066	5Times	All Series
18	ESD Test	HBM：100pF,1500Ω ,GPP:4KV; Others:2KV;MM：200pF,0Ω ,400V	AEC-Q101-001/002	1cycle	All Series