R1171S (-FE) Series Reliability Test Report

301171SFE -Ver. Aa

FUNCTION : Voltage Regulator ICs

PACKAGE : HSOP-6J ··· Tin plate (Sn (Matte-Tin)), Halogen free resin

No.	TEST ITEM	TEST CONDITION	(*)PRE-CONDITION	TIME	r/n
1	High Temp. Operating Life	Ta=125℃ VDD=Vopt max. Static	No	1000h	0/32
2	Temp. Humidity Bias	Ta=85℃ RH=85% VDD=Vopt max. Static	(1)+(2)	1000h	0/22
3	High Temp. Storage	Ta=125℃	No	1000h	0/22
4	Low Temp. Storage	Ta=-55℃	No	1000h	0/22
5	Temp. Humidity	Ta=85℃ RH=85%	(1)+(2)	1000h	0/22
6	Temp. Cycle	Ta=-55 to 125℃ (30-30min)	(1)+(2)	100cycles	0/11
7	USPCBT	Ta=125℃ RH=85% 2X10^5Pa VDD=Vopt max. Static	(1)+(2)	100h	0/11
8	USPCT	Ta=125℃ RH=85% 2X10^5Pa	(1)+(2)	100h	0/11
9	Resistance To Soldering Heat(1)	IR Reflow (See Fig.1)	(1)	3times	0/88
10	Resistance To Soldering Heat(2)	Ta=350℃ (Soldering iron)	(1)	5s	0/11
11	Solderability by Solder Dip Method(1)	Ta=235℃ (Solder: Sn-37Pb)	(3)	5s	0/11
12	Solderability by Solder Dip Method(2)	Ta=245℃ (Solder: Sn-3.0Ag-0.5Cu)	(3)	5s	0/11
13	Solderability by Wetting Balance Method(1)	Ta=235℃ (Solder: Sn-37Pb)	(3)	Zero cross Time 3s	0/5
14	Solderability by Wetting Balance Method(2)	Ta=245℃ (Solder: Sn-3.0Ag-0.5Cu)	(3)	Zero cross Time 3s	0/5
15	ESD(1)	MM C=200pF R=0 ohm ±150V	No	5times	0/11
16	ESD(2)	HBM C=100pF R=1.5k ohm ±2.0kV	No	3times	0/11
17	ESD(3)	CDM ±1.0kV	No	Once	0/11
18	Latch-up	Pulse Current Injecting Method ±100mA	No	Once	0/11

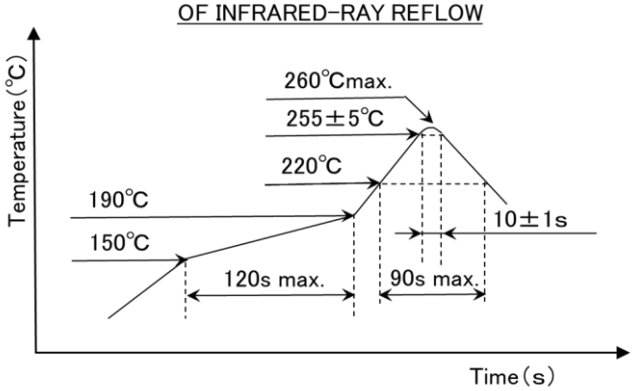
Criteria : The electrical characteristics prescribed in the individual specifications shall be satisfied.

*) Pre-Condition
The test shall be performed this pre-condition before testing.

(1) Ta=85℃, RH=85%, storage=168h
(2) IR Reflow soldering heat stress (3times)
(3) In steam, storage=4h

[Moisture Sensitivity Level]
MSL Level = 1 (J-STD-020)

HEATING TREATMENT CONDITION OF INFRARED-RAY REFLOW



Conclusion : The reliability result was good.