

# RP116Z Series Reliability Test Report

30P116ZFD -Ver. Aa

FUNCTION : Voltage Regulator ICs

PACKAGE : WLCSP-4-P7 ... Lead free-solder ball (Sn-3.0Ag-0.5Cu), Halogen free resin

No.	TEST ITEM	TEST CONDITION	(*)PRE-CONDITION	TIME	r/n
1	High Temp. Operating Life	Ta=125°C VDD=Vopt max. Static	No	1000h	0/32
2	Temp. Humidity Bias	Ta=85°C RH=85% VDD=Vopt max. Static	(1)+(2)	1000h	0/22
3	High Temp. Storage	Ta=150°C	No	1000h	0/22
4	Low Temp. Storage	Ta=-65°C	No	1000h	0/22
5	Temp. Humidity	Ta=85°C RH=85%	(1)+(2)	1000h	0/22
6	Temp. Cycle	Ta=-65 to 150°C (30-30min)	(1)+(2)	100cycles	0/11
7	USPCBT	Ta=125°C RH=85% 2X10 <sup>5</sup> Pa VDD=Vopt max. Static	(1)+(2)	100h	0/11
8	USPCT	Ta=125°C RH=85% 2X10 <sup>5</sup> Pa	(1)+(2)	100h	0/11
9	Resistance To Soldering Heat	IR Reflow (See Fig.1)	(1)	3times	0/88
10	ESD(1)	MM C=200pF R=0 ohm ±200V	No	5times	0/11
11	ESD(2)	HBM C=100pF R=1.5k ohm ±2.0kV	No	3times	0/11
12	ESD(3)	CDM ±1.0kV	No	Once	0/11
13	Latch-up	Pulse Current Injecting Method ±100mA	No	Once	0/11

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

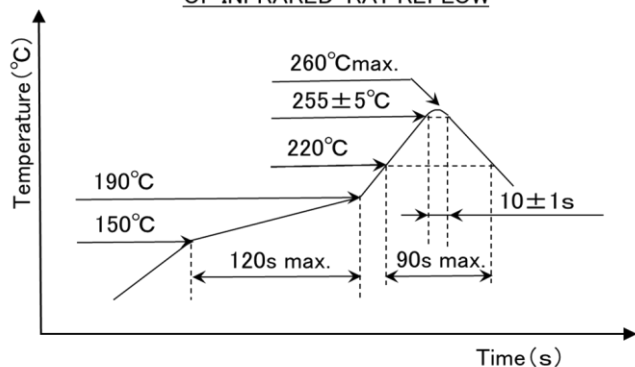
**\*) Pre-Condition**

The test shall be performed this pre-condition before testing.

- (1) Ta=85°C, RH=85%, storage=168h
- (2) IR Reflow soldering heat stress (3times)

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

**HEATING TREATMENT CONDITION OF INFRARED-RAY REFLOW**



Conclusion : The reliability result was good.