# R3116K Series Reliability Test Report

303116K0E-Ver.B

FUNCTION : Voltage Detector ICs

PACKAGE : DFN(PLP)1010-4 ··· Au plate, Halogen free resin

| No. | TEST ITEM | TEST CONDITION | (*)PRE-CONDITION | TIME | r/n |
|---|---|---|---|---|---|
| 1 | High Temp. Operating Life | Ta=125℃ VDD=Vopt max. Static | Non | 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=150℃ | Non | 1000h | 0/22 |
| 4 | Low Temp. Storage | Ta=-65℃ | Non | 1000h | 0/22 |
| 5 | Temp. Humidity | Ta=85℃ RH=85% | (1)+(2) | 1000h | 0/22 |
| 6 | Temp. Cycle | Ta=-65 to 150℃ (30-5-30min) | (1)+(2) | 100cycles | 0/11 |
| 7 | Thermal Shock | Ta=-65 to 150℃ (5min-10s-5min) | (1)+(2) | 100cycles | 0/11 |
| 8 | USPCBT | Ta=125℃ RH=85% 2X10$^5$Pa VDD=Vopt max. Static | (1)+(2) | 100h | 0/11 |
| 9 | USPCT | Ta=125℃ RH=85% 2X10$^5$Pa | (1)+(2) | 100h | 0/11 |
| 10 | Resistance To Soldering Heat(1) | IR Reflow (See Fig.1) | (1) | 3times | 0/88 |
| 11 | Resistance To Soldering Heat(2) | Ta=350℃ (Soldering iron) | (1) | 5s | 0/11 |
| 12 | Solderability by Solder Dip Method(1) | Ta=235℃ (Solder: Sn-37Pb) | (3) | 5s | 0/11 |
| 13 | Solderability by Solder Dip Method(2) | Ta=245℃ (Solder: Sn-3.0Ag-0.5Cu) | (3) | 5s | 0/11 |
| 14 | ESD(1) | MM C=200pF R=0 ohm ±200V | Non | 5times | 0/11 |
| 15 | ESD(2) | HBM C=100pF R=1.5k ohm ±2.0kV | Non | 3times | 0/11 |
| 16 | ESD(3) | CDM ±1.0kV | Non | Once | 0/11 |
| 17 | Latch-up | Pulse Current Injecting Method ±100mA | Non | Once | 0/11 |

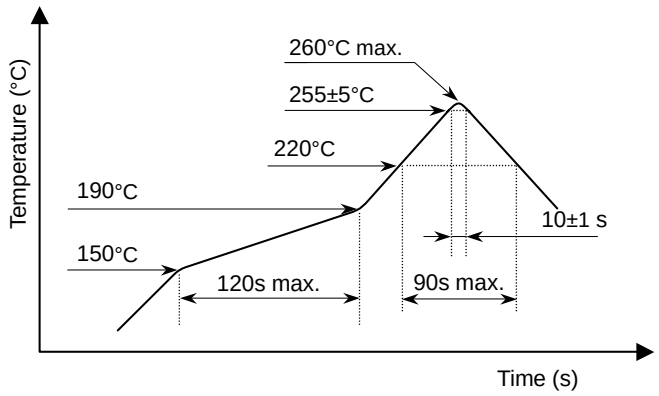
Criteria : The electrical characteristics prescribed in the individual specifications shall be satisfied.

*) 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.