

RELIABILITY TEST DATA

Product Name : FA-128 (16.0 ≤ f 0 < 24.0 MHz)

The Company evaluation condition

We evaluate environmental and mechanical characteristics by the following test condition .

No. F-A-0502-05-007E

| No. | ITEM | TEST CONDITIONS | VALUE *1 *2 | TEST | FAIL |
|-----|------------------------------|---|--|--------------|--------------|
| | | | $\Delta F/f$ [1 × 10 ⁻⁶] | Qty [n] | Qty [n] |
| 1 | Drop | 150g dummy Jig (Epsontoyocom Standard) drop from 1500 mm height on the Concrete 6 directions 10 times | *3 ± 2 | 22 | 0 |
| 2 | Vibration | 10 Hz to 55 Hz amplitude 0.75 mm 55 Hz to 500 Hz acceleration 98 m/s ² 10 Hz → 500 Hz → 10 Hz 15 min / cycle 6 h (2 h × 3 directions) | *3 ± 2 | 22 | 0 |
| 3 | High temperature storage | +85 °C × 1 000 h | *3 ± 2 | 22 | 0 |
| 4 | Low temperature storage | -40 °C × 1 000 h | *3 ± 2 | 22 | 0 |
| 5 | Temperature cycle | -40 °C ↔ + 85 °C 30 min at each temp. 100 cycles | *3 ± 2 | 22 | 0 |
| 6 | Temperature humidity storage | +85 °C × 85 %RH × 1 000 h | *3 ± 2 | 22 | 0 |
| 7 | Resistance to soldering heat | For convention reflow soldering furnace (3 times) | ± 2 | 22 | 0 |
| 8 | Substrate bending | Bend width reaches 3.0 mm and hold for 5 s ± 1 s × 1 time Ref. IEC 60068-2-21 | No peeling - off at a solder part | 11 | 0 |
| 9 | Shear | 10 N press for 10 s ± 1 s Ref. IEC 60068-2-21 | No peeling - off at a solder part | 11 | 0 |
| 10 | Pull - off | 10 N press for 10 s ± 1 s Ref. IEC 60068-2-21 | No peeling - off at a solder part | 11 | 0 |
| 11 | Solderability | Dip termination into solder bath at +235°C ± 10 °C for 5 s (Using Rosin Flux) | Termination must be 95 % covered with fresh solder | 11 | 0 |

Notes

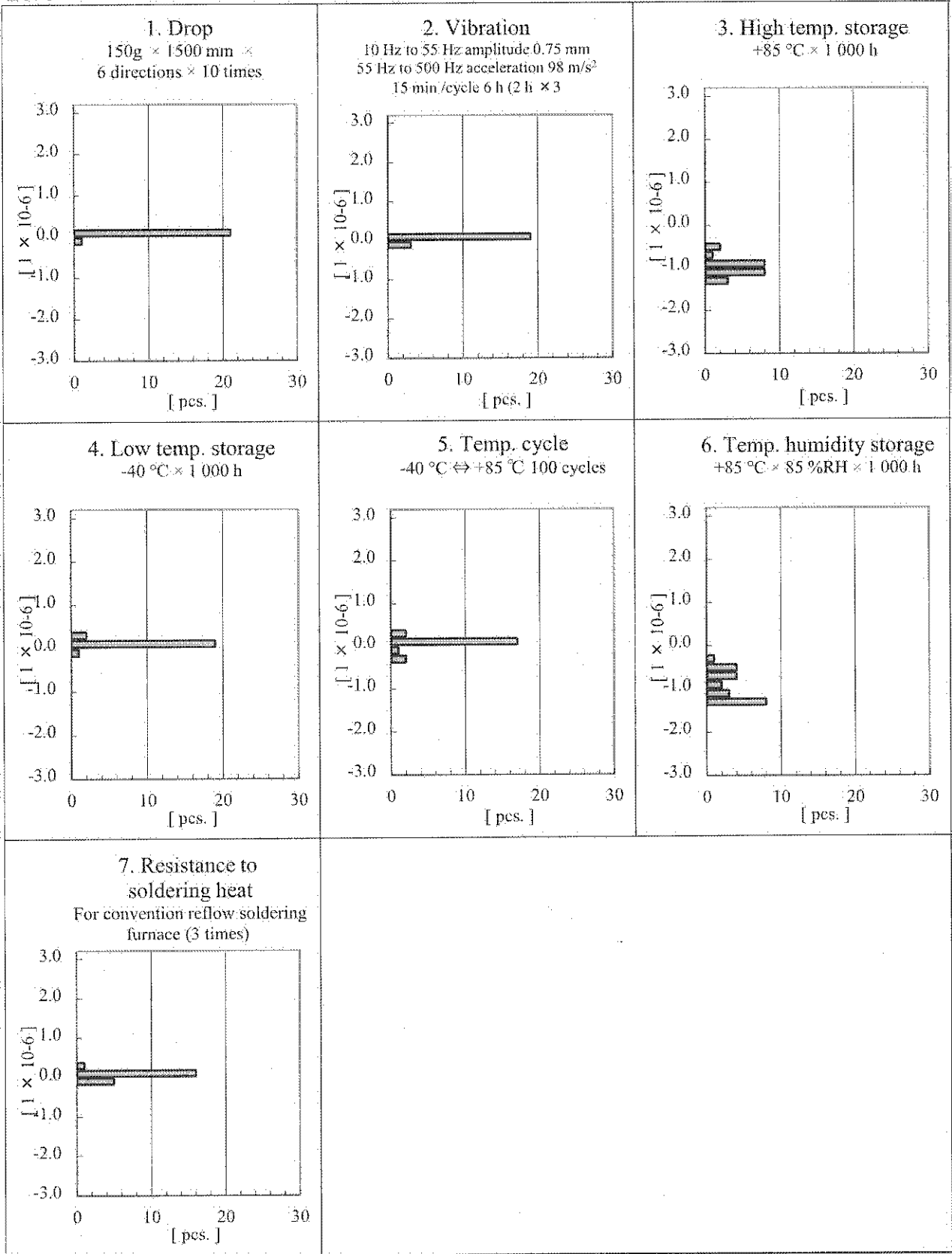
1. *1 Each test done independently.
2. *2 Measuring 2 h to 24 h later leaving in room temperature after each test.
3. *3 Measuring 24 h later leaving in room temperature after each test.
 1. Reflow 3 times
 2. Initial value shall be after 24h at room temperature.
4. Shift series resistance at before above tests should be less than ±20 % or less than ±10 Ω.

Qualification Data

Product Name : FA-128 ($16.0 \leq f < 24.0\text{MHz}$)

No. F-A-0502-05-008E

$\Delta f/f$



Product Name : FA-128 ($16.0 \leq f < 24.0\text{MHz}$)

A Cl

No. F-A-0502-05-009E

