

TAPING SPECIFICATION

1. APPLICATION

This document is applicable to FA-128

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[1] Taping specification

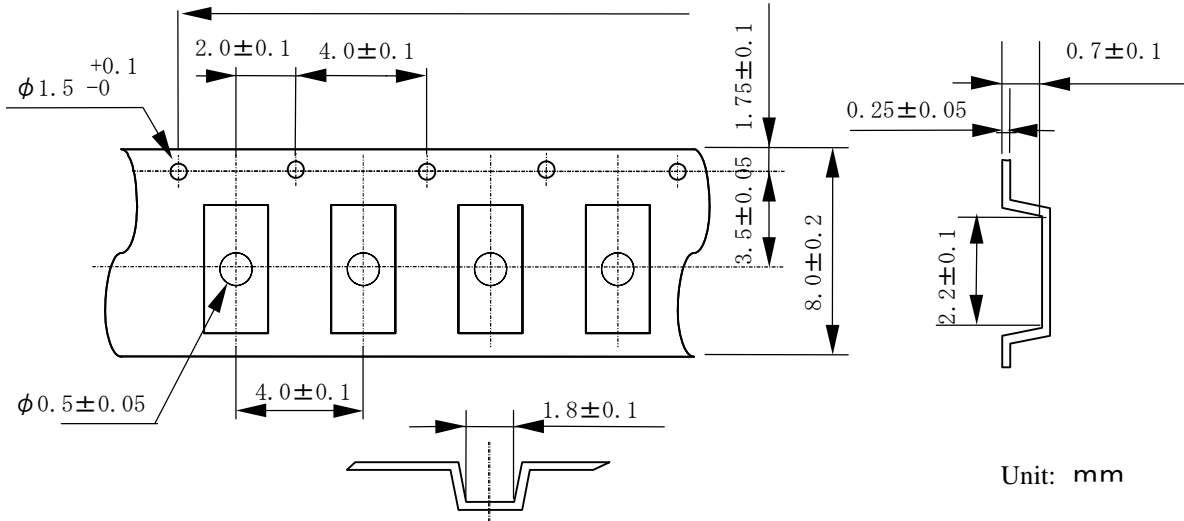
Subject to EIA-481 & IEC-60286

(1) Tape dimensions TE0804L

Material of the Carrier Tape : PS

Material of the Top Tape : PET+PE

10P : 40 ± 0.15

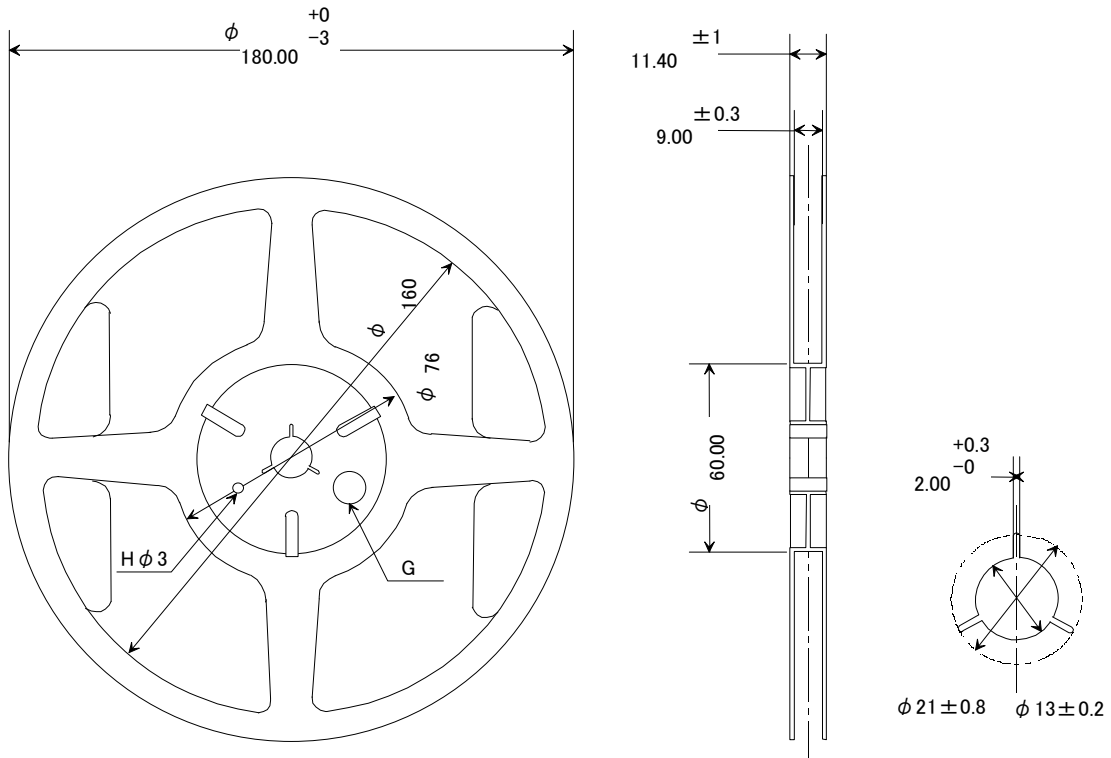


Unit: mm

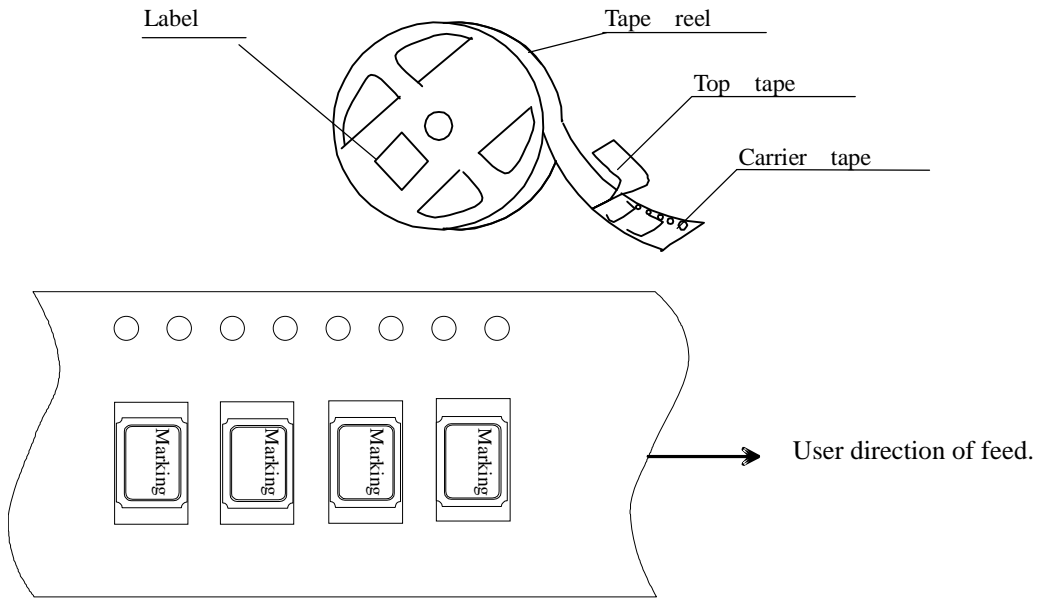
(2) Reel dimensions

(a) Center material : PS

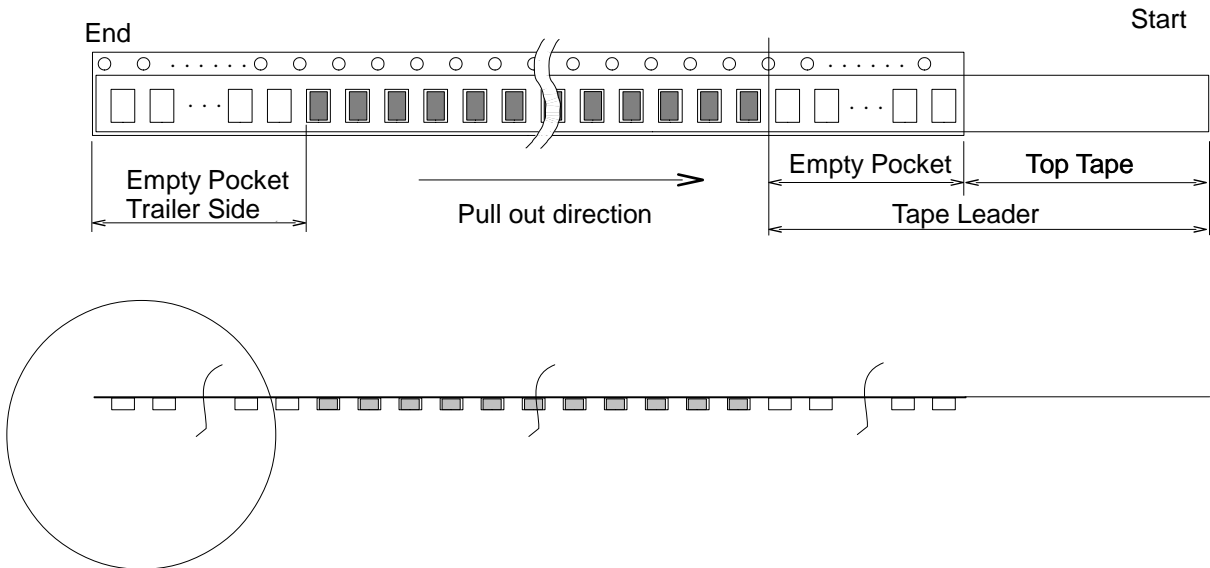
(b) Material of the Reel : PS



(3) Packing
(a) Tape & Reel



(b) Start & End Point



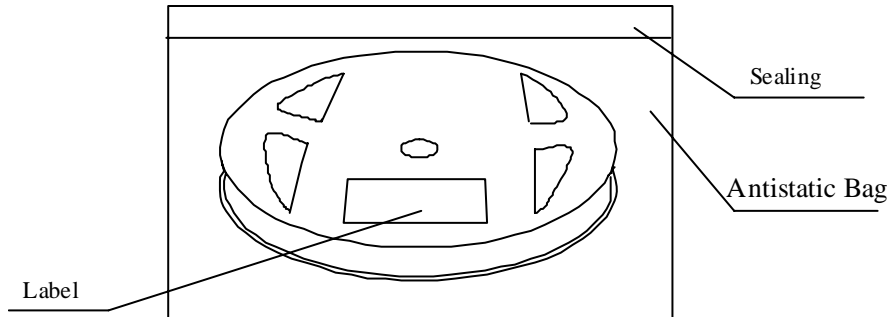
Item		Empty Space
Tape Leader	Top Tape	Min. 1 000 mm
	Carrier Tape	Min. 100 mm
Tape Trailer	Top Tape	Min. 0 mm
	Carrier Tape	Min. 160 mm

(4) Peel force of the cover tape

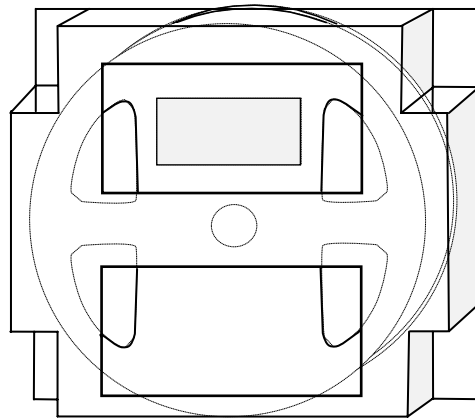
- ① angle : cover tape during peel off and the direction of unreeling shall be 165° to 180°.
- ② peel speed : 300 mm / min.
- ③ strength : 0.1 to 1 N.

[2] Inner Sleeve

a) Packing to antistatic bag

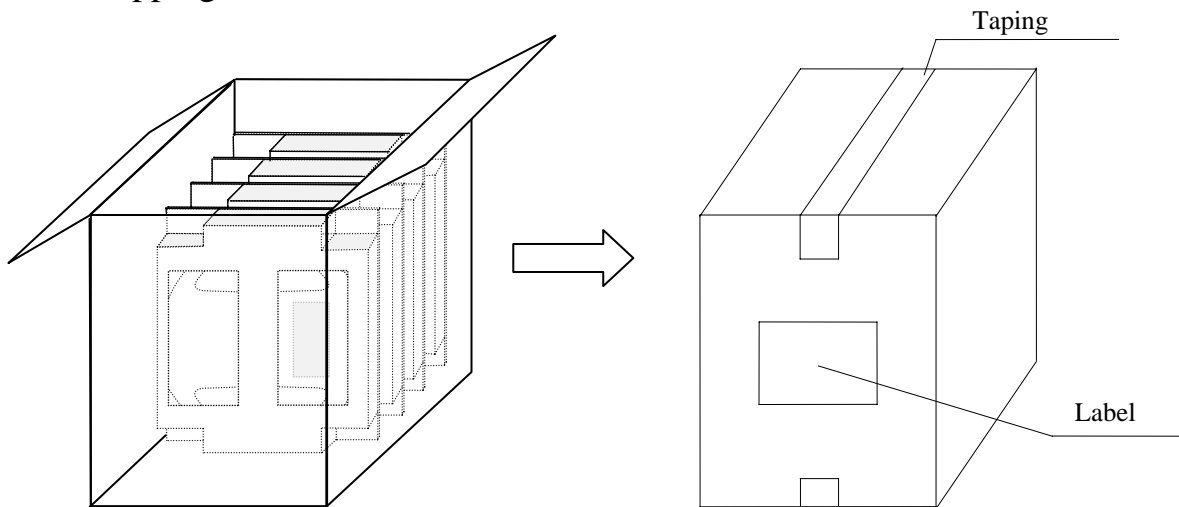


b) Packing to inner sleeve



* There is also a case to put the two reel.

[3] Shipping Carton



[4] Marking

- (1) Reel marking
 - Reel marking shall consist of :
 - 1) Parts name
 - 2) Quantity
 - 3) Manufacturing Date or symbol
 - 4) Manufacturer's Date or symbol
 - 5) Others (if necessary)

- (2) Shipping carton marking
 - Shipping carton marking shall consist of :
 - 1) Parts name
 - 2) Quantity

[5] Quantity

- 3 000 pcs./reel

[6] Storage environment

- (1) Before open the packing, we recommend to keep less than +30 °C and 85 %RH of Humidity, and to use it less than 6 months after delivery.
- (2) We recommend to open Package in immediately before use. After open Package, We recommend to keeps less than 6 month. No need dry air before soldering work if it is less than temperature +30 °C, 85 humidity %RH.
- (3) Not to expose the sun.
- (4) Not to storage with some erosive chemicals.
- (5) Nothing is allowed to put on the reel or carton to prevent mechanical damage.

[7] Handling

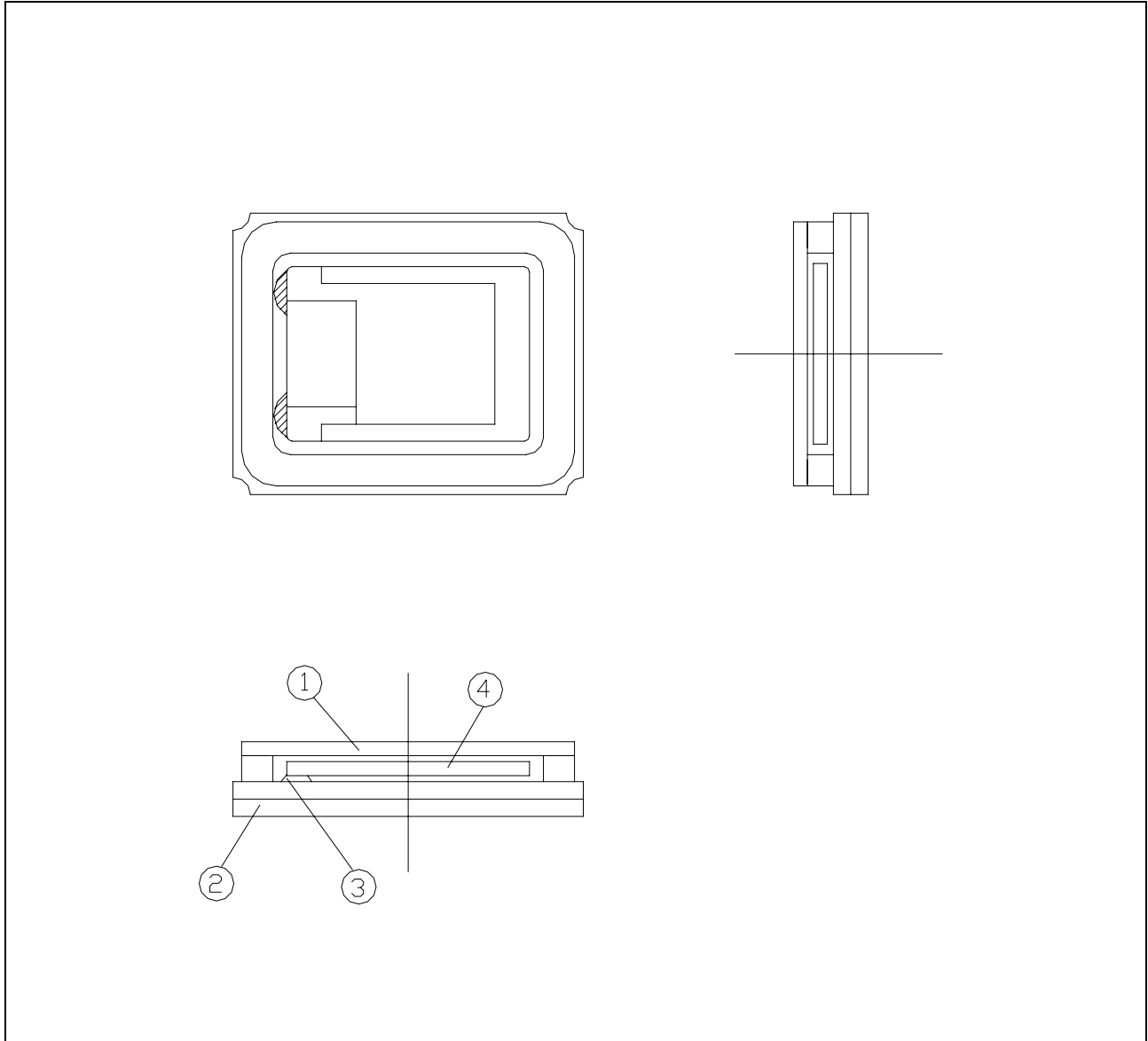
To handle with care to prevent the damage of tape, reel and products.

SMD TYPE AT STRIP CRYSTAL : FA-128

Manufacturing process chart	No.	Section	Standard	Inspection, Control items	Inspection method	Instrument	Record
	1	Inspecting section.	Purchasing specification Incoming inspection standard	Size. Outer appearance. Inner appearance.	Sampling. " "	Measure. Visual inspection. Visual inspection.	In-coming inspection data sheet.
	1'	Inspecting section.	"	Size. Outer appearance.	Sampling. "	Comparator. Micro scope.	"
	2	Inspecting section.	Manufacturing instruction sheet	Cut angle. Wafer thickness.	Sampling. "	X-ray raído grafic. Comparator.	Process data sheet.
	3	Producing section.	"	Frequency. Wafer thickness.	Sampling. "	Frequency counter. Comparator.	"
	4	Producing section.	"	Size. Frequency. Outer appearance.	Sampling. " "	Comparator. Frequency counter. Micro scope.	"
	5	Producing section.	"	Outer appearance.	All insprcion.	Micro scope.	"
	6	Producing section.	"	Frequency.	Sampling.	Network analyzer.	"
	7	Producing section.	"	Outer appearance.	Sampling.	Micro scope.	"
	8	Producing section.	"	Airtightness check.	All insprcion.	Leak tester.	"
	9	Producing section.	"	Outer appearance.	Sampling.	Micro scope.	"
	10	Producing section.	"	Crystal impedance. Frequency. Insulation resistance. Temp. characteristic.	All insprcion. " " Sampling.	Inspectional machine. " " "	"
	11	Inspecting section.	Out-going inspection standard	Crystal impedance. Frequency. Insulation resistance. Outer appearance.	Sampling. " " "	Inspection M/C. " " Micro scope.	Out-going inspection data sheet.
	12	Producing section.	Manufacturing instruction sheet	Tape-peel strength.	Sampling.	Peelinf force tester.	Process data sheet.
13	Product control section.	Manufacturing instruction sheet Packing instruction sheet	Address. Quantity.	—	—	Delivery slip.	

Structure Diagram 構造図

Model 型式	FA-128	
Document No. 管理No.	A-0502-A-1	FA-128_D_0001



④	Crystal chip 水晶片	
③	Crystal Adhesive 水晶接着	
②	Package パッケージ	
①	Lid リッド	
No.	Name of Part 部品名	

RELIABILITY TEST DATA
Product Name : FA-128

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

No.	ITEM	TEST CONDITIONS	VALUE *1 *2	TEST	FAIL
			$\Delta f / f$ [1 × 10 ⁻⁶]	Qty [n]	Qty [n]
1	Drop	150 g dummy Jig (Epsontoyocom Standard) drop from 1 500 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

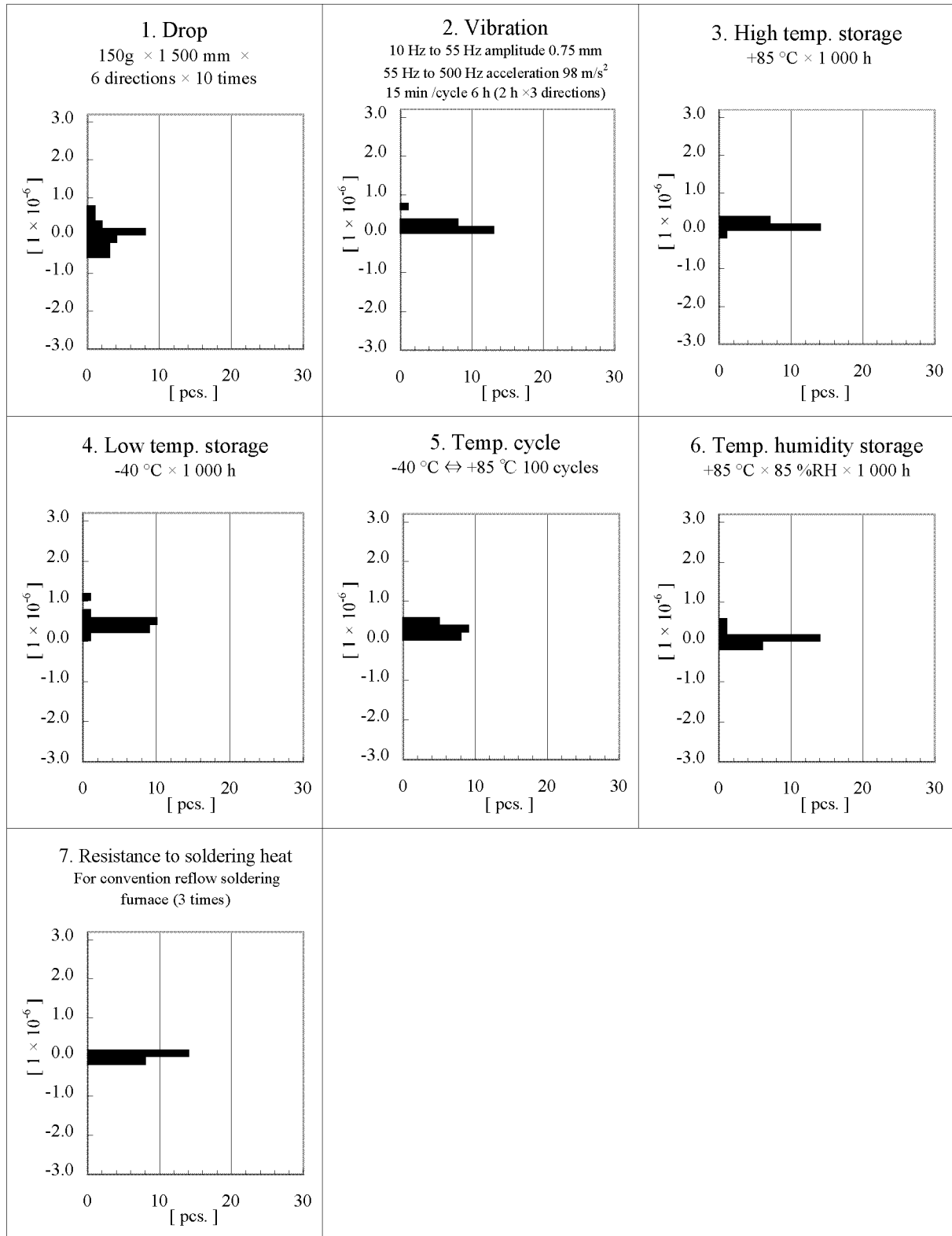
Notes

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

$\Delta f / f$



Product Name : FA-128

ΔCI

