



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: SAW Duplexer 1950/2140MHz SMD 2.5x2.0 mm

TST Part No.: TF0055A

Customer Part No.: _____

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: _____ Kevin 

Approved by: _____ Francis Chen 

Date: _____ 6/1/2012

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.



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SAW Duplexer 1950/2140MHz

MODEL NO.: TF0055A

REV. No.: 1

A. MAXIMUM RATING:

1. Input Power at TX port: 0.6W
2. DC voltage: 0V
3. Operating Temperature: -20°C to +85°C
4. Storage Temperature: -40°C to +85°C

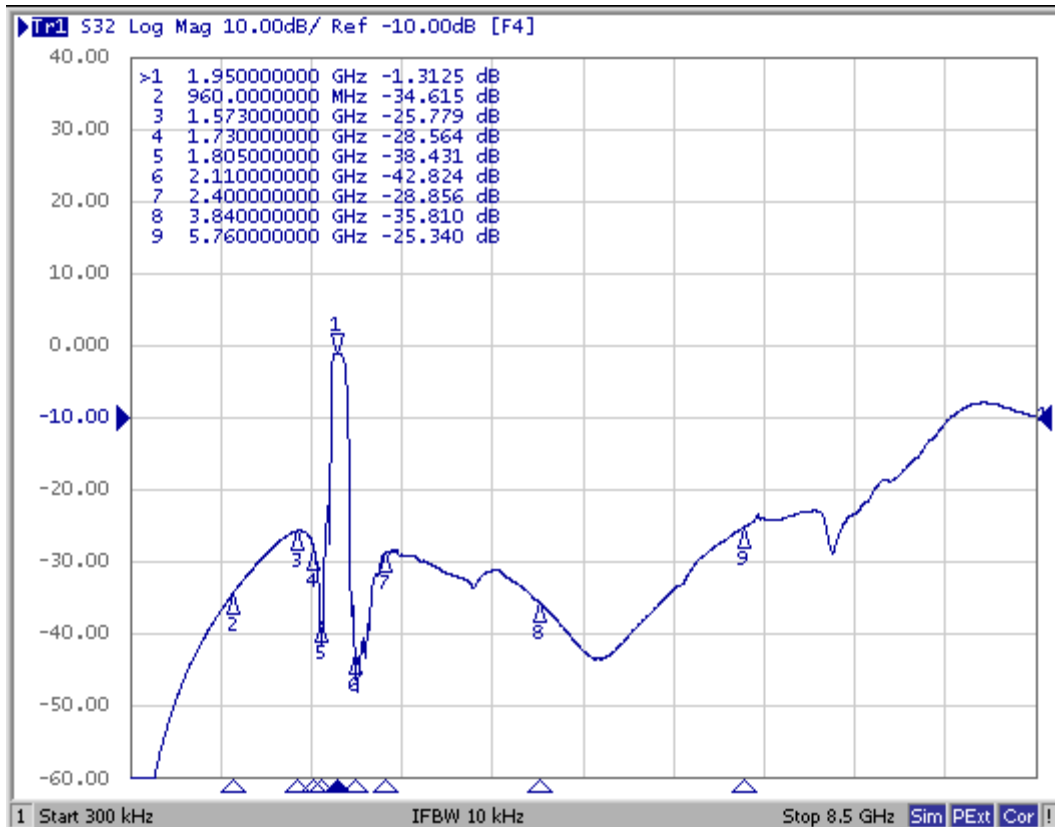
B. ELECTRICAL CHARACTERISTICS:

Item		Specifications			Unit	Test condition
		min.	typ.*	max.		
TX to ANT						
4.1	Insertion loss		1.3	1.75	dB	1920 ... 1980MHz
4.2	VSWR (ANT port)		1.3	1.7		
	VSWR (TX port)		1.2	1.7		
4.3	Passband ripple		0.3	0.85	dB	
4.4	Attenuation from 0 level	30	36		dB	925 ... 960MHz
		25	27		dB	1573 ... 1577MHz
		25	29		dB	1730 ... 1790MHz
		3	6		dB	1805 ... 1880MHz
		42	44		dB	2110 ... 2170MHz
		25	28		dB	2400 ... 2500MHz
		25	38		dB	3840 ... 3960MHz
		18	22		dB	5760 ... 5940MHz

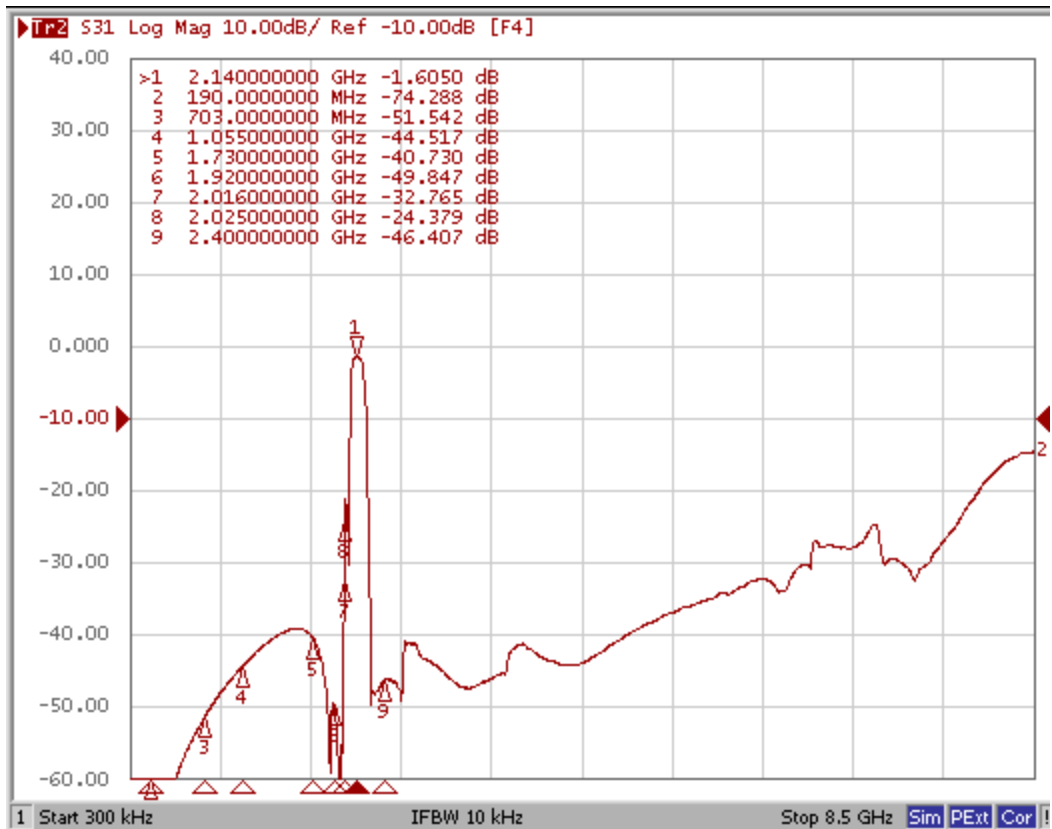
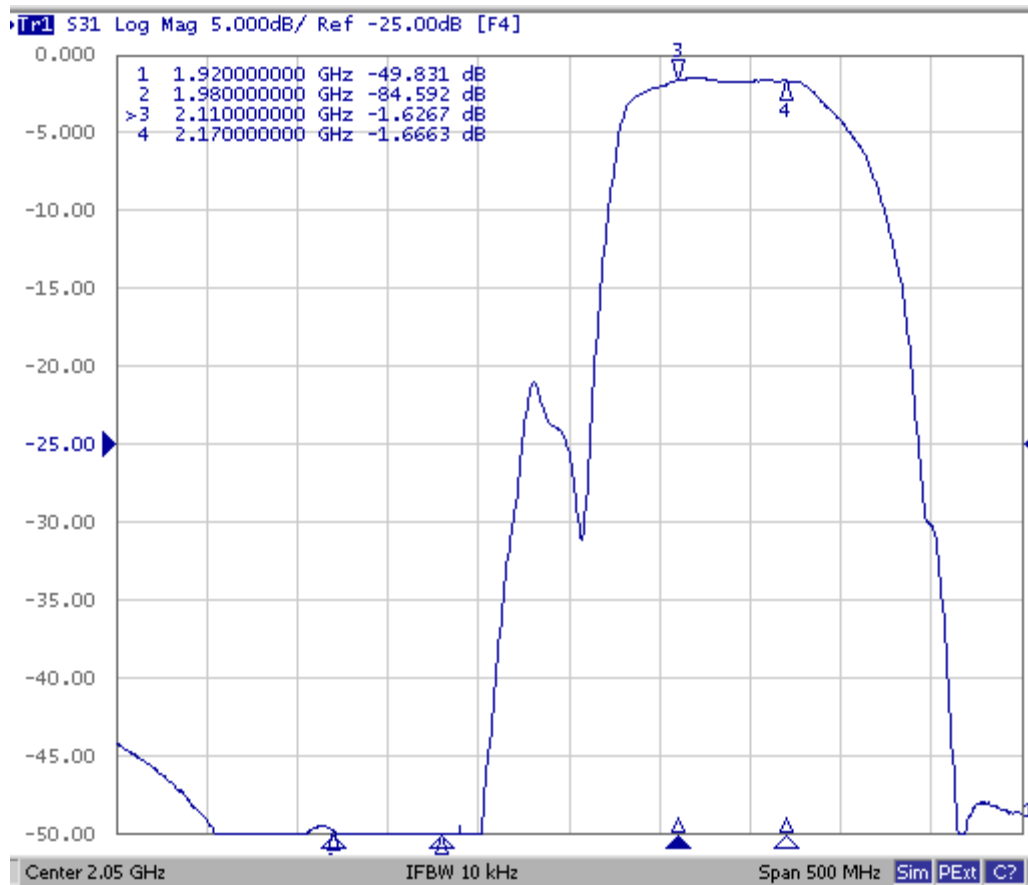
ANT to RX						
4.5	Insertion loss		1.9	2.2	dB	2110 ... 2170MHz
4.6	VSWR (ANT port)		1.35	1.7		
	VSWR (RX port)		1.50	1.9		
4.7	Passband ripple		0.5	1.0	dB	
4.8	Attenuation from 0 level	50	70		dB	190MHz
		30	48		dB	703 ... 724MHz
		42	45		dB	1055 ... 1085MHz
		38	40		dB	1730 ... 1790MHz
		48	50		dB	1920 ... 1980MHz
		18	21		dB	2016 ... 2025MHz
		13	21		dB	2025 ... 2050MHz
		3	5		dB	2050 ... 2075MHz
		40	47		dB	2400 ... 2500MHz
		35	42		dB	4030 ... 4150MHz
		25	35		dB	5950 ... 6130MHz
TX to RX						
4.9	Attenuation from 0 level	54	58		dB	1920 ... 1980MHz
		41	43		dB	2110 ... 2170MHz
4.10	Terminating impedance	ANT port	50 //3.3nH		ohm	single ended
		TX port	50		ohm	single ended
		RX port	50		ohm	single ended

C. Frequency Characteristics :

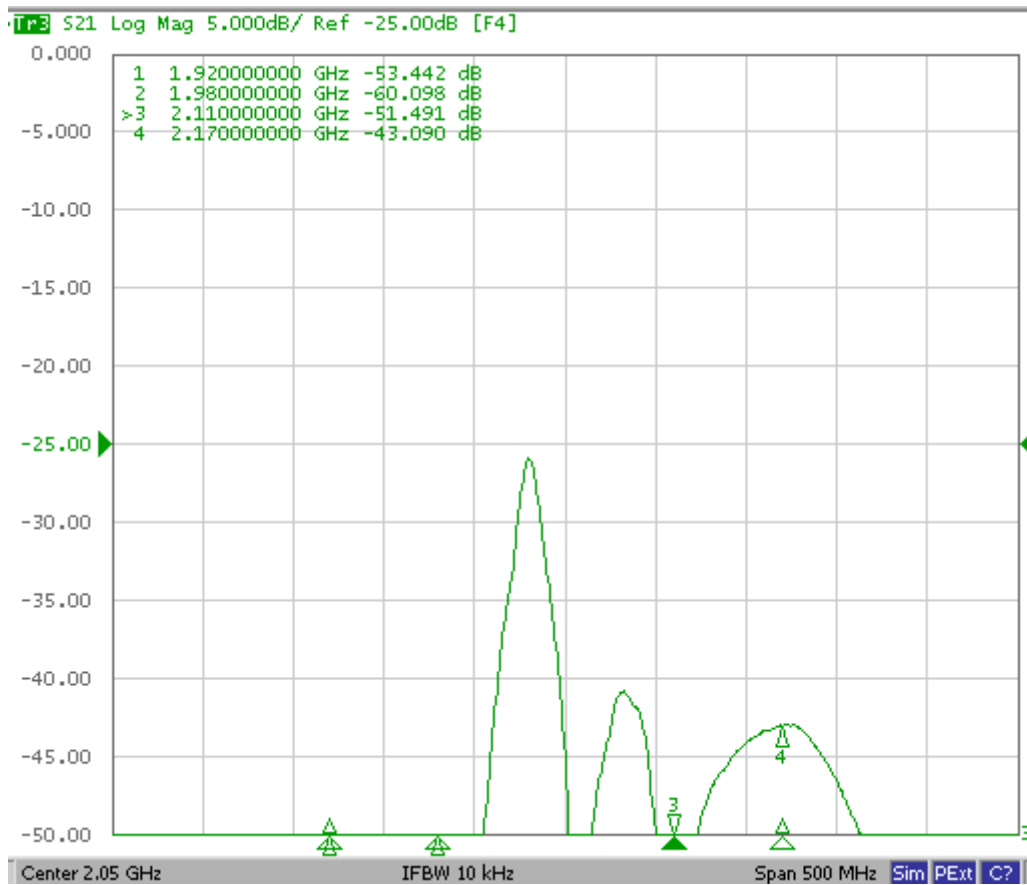
TX to Ant:



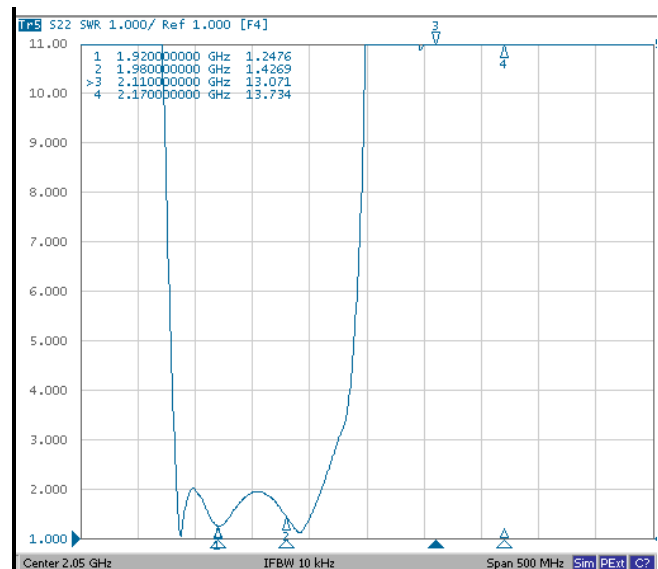
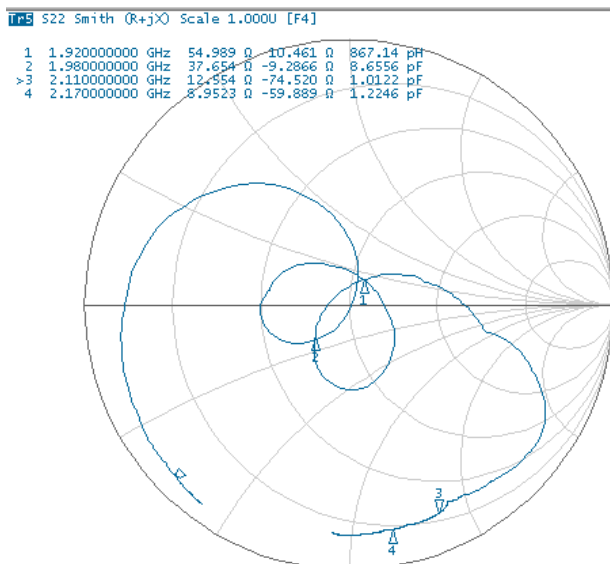
Ant to Rx:



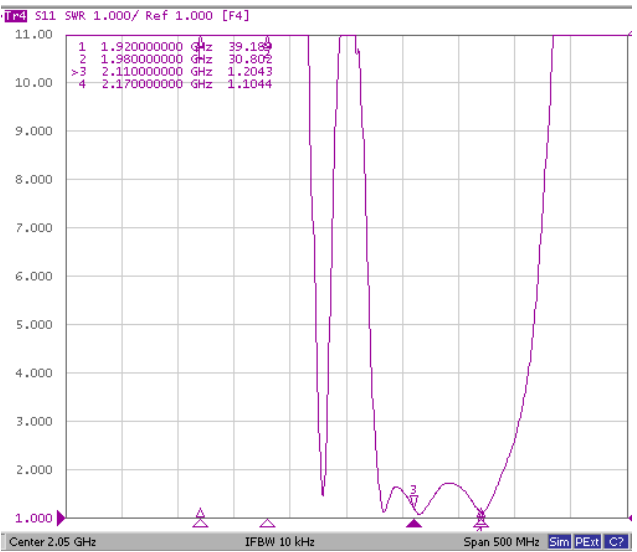
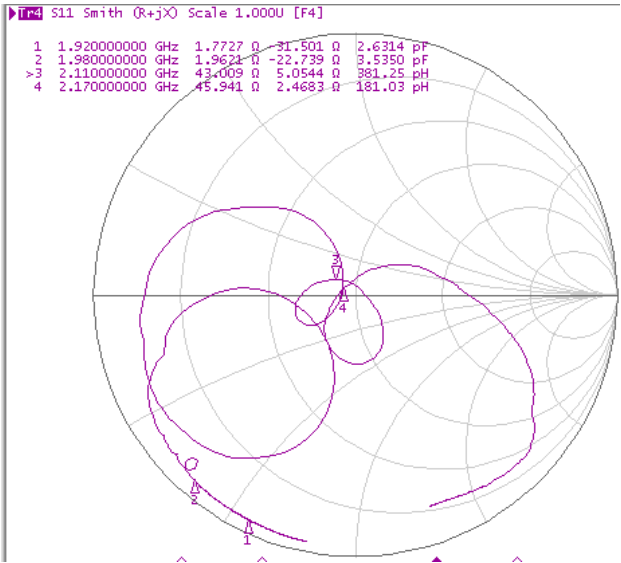
Tx to Rx:



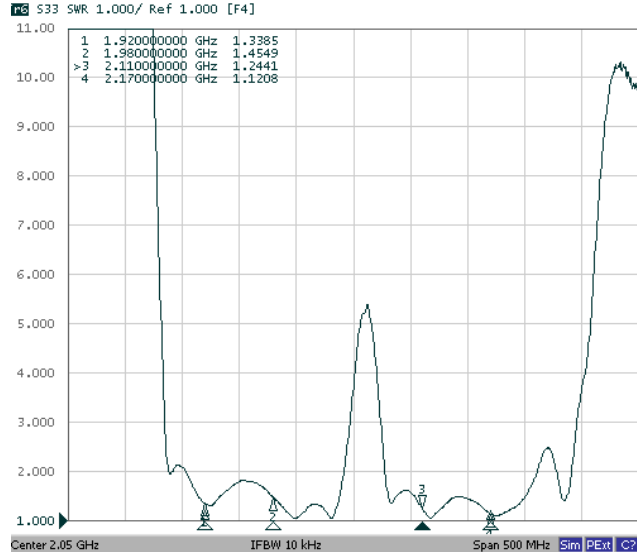
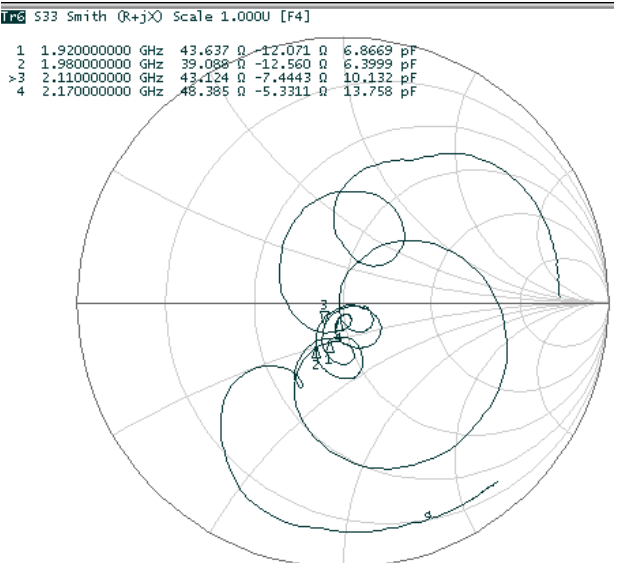
Tx port:



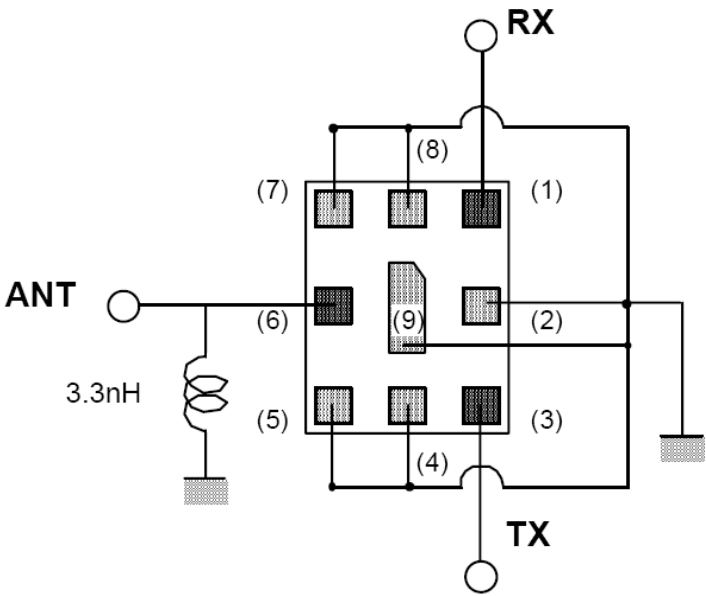
Rx port:



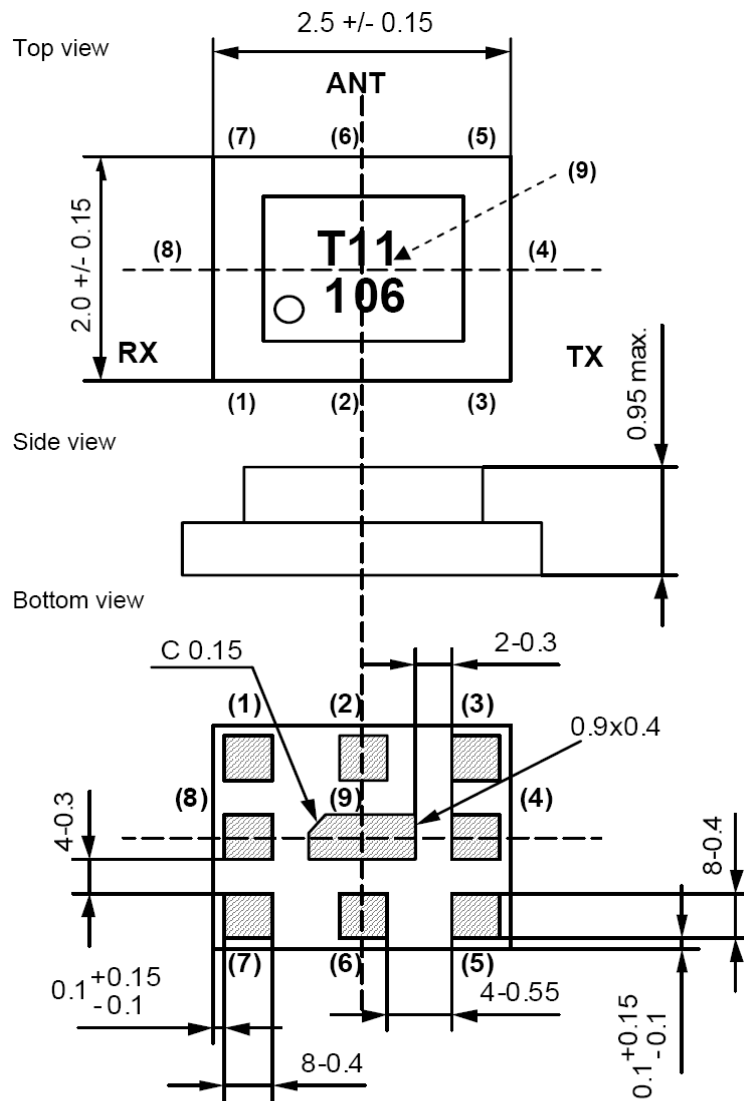
ANT to port:



E. MEASUREMENT CIRCUIT:



F.OUTLINE DRAWING:



Unit : mm

tolerance without indication : $\pm 0.075 \text{ mm}$

Marking

T11
(1)
1 06
(2) (3)

- (1) Type symbol
- (2) Production year
1 ----- 2011
2 ----- 2012
- (3) Production week
Calendar week

Pin configuration

- (1) Rx
- (2) GND
- (3) Tx
- (4) GND
- (5) GND
- (6) Ant
- (7) GND
- (8) GND
- (9) GND

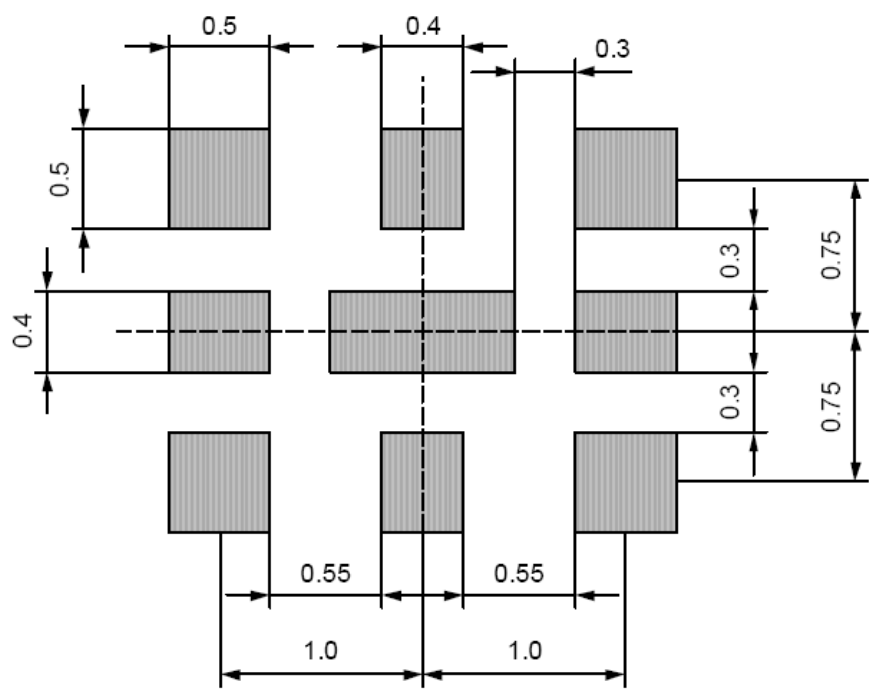
Based Materials

Al2O3 90%min.

Terminal Materials

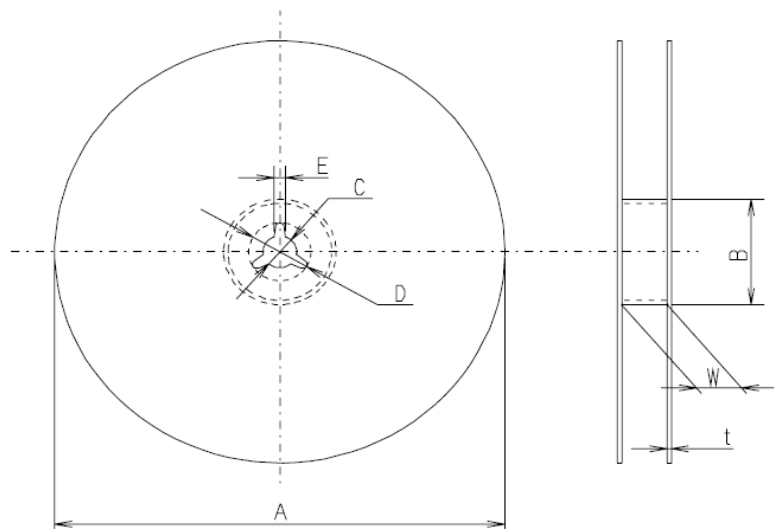
- 1. Molybdenum metarize
- 2. Nickel plate 1.5um min.
- 3. Gold plate 0.1 ... 0.5um

G. PCB Footprint:



H. PACKING:

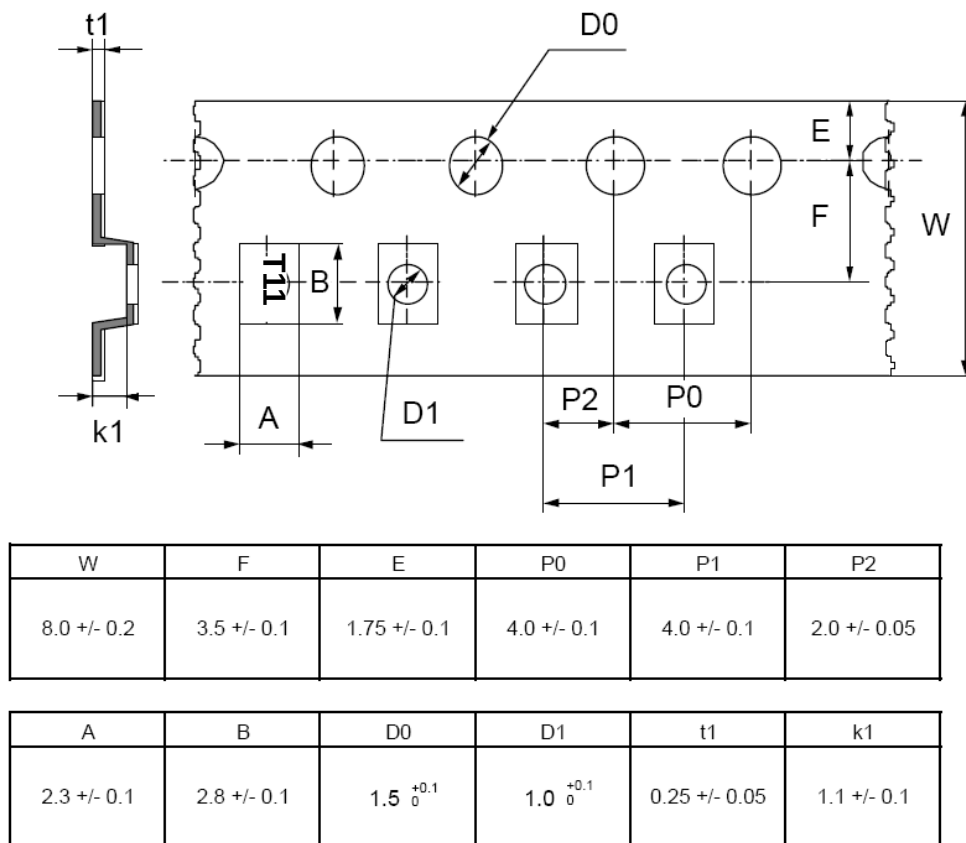
1. REEL DIMENSION



A	B	C	D	E	W	t
178 +/- 3	60 +/- 1.0	13 +/- 0.5	21 +/- 0.8	2.0 +/- 0.5	9.0 +/- 0.3	3.0 max.

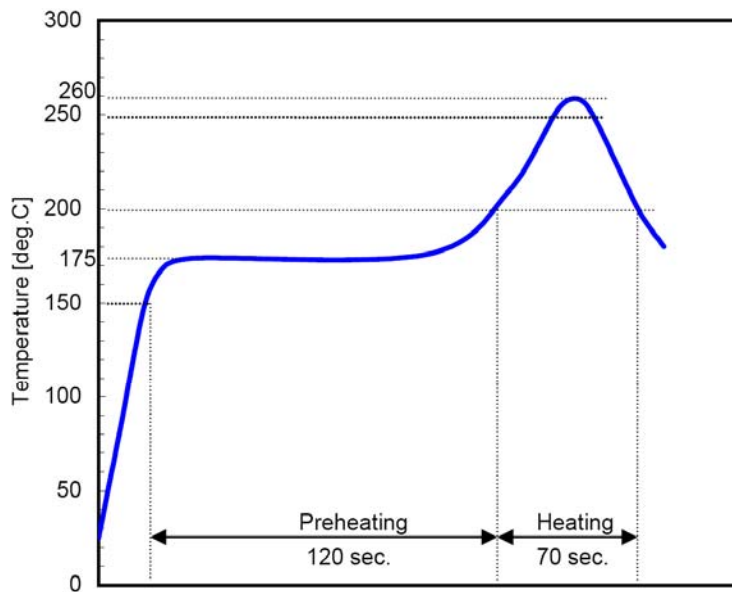
Unit: mm

2. TAPE DIMENSION



Unit : mm

I. RECOMMENDED REFLOW PROFILE :



Preheating temperature and time

150 ... 200deg.C, 60-120sec.

Peak temperature

260 +0/-5 deg.C

Heating time over 200deg.C

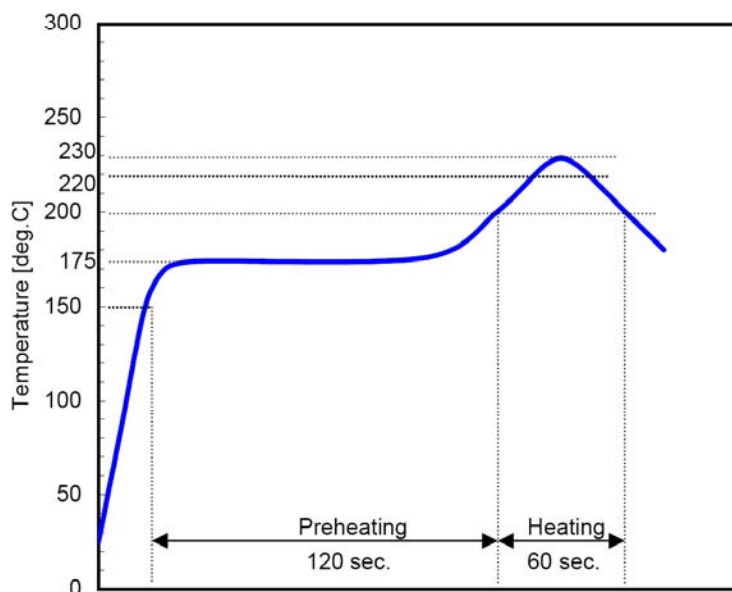
70sec.

Heating time over 250deg.C

10sec. max.

The measuring point of the specified temperature is the top surface.

Reflow profile for solder heat proof test



Preheating temperature and time

150 ... 200deg.C, 60-120sec.

Peak temperature and time

230 +0/-5 deg.C, 3sec. min.

Heating time over 200deg.C

60sec.

Heating time over 220deg.C

25sec.

The measuring point of the specified temperature is the top surface.

The recommended solder paste

Sn, 3% Ag and 0.5% Cu

Flux

Rosin(JISK5902)

Methanol(JISK1501)

Strength of this methanol solution is about 25wt%.

Reflow profile for solderability test