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 Name: SAW DPX 733 / 788MHz 30/30MHz BW Band28 B SMD1.8X1.4 mm

TST Parts No.: TF0159A

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen

Approved by:_____ Andy Yu

Date:_____ 2018/04/20

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 change

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SAW DPX 733/788MHz 30/30MHz BW Band28 SMD1.8X1.4 mm

MODEL NO.: TF0159A REV. No.: 1.0

A. MAXIMUM RATING:

RoHS Compliant
Lead free
Lead-free soldering

1. Input power : 29dBm (Ta=+50deg C,50000h,CW)
2. Maximum DC Voltage: +/-5 V
3. Operating temperature range: -30 ℃ to +85 ℃
4. Storage temperature range: -30 ℃ to +85 ℃
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD 100V(MM) 200V(HBM)

Electrostatic **S**ensitive **D**evice (**ESD**)

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance(Tx Port): 50//12nH Ω (Single-ended)
Terminating impedance(Rx Port): 50 Ω (Single-ended)
Terminating impedance(Ant Port): 50//8.2nH Ω (Single-ended)

Tx to ANT

Parameters Description			Unit	Minimum	Typical	Maximum	Note
Insertion Loss		718 ~ 748 MHz	dB(*1)	-	1.8	2.8	
		718.25 ~ 747.75 MHz			1.7	2.6	
Ripple		718 ~ 748 MHz	dB	-	1.1	2.5	
VSWR	Tx	718 ~ 748 MHz	-	-	1.9	2.2	
	ANT		-	-	1.8	2.1	
Attenuation:							
10 ~ 698 MHz			dB	32	36	-	-
698 ~ 710 MHz			dB	16	26	-	-
758 ~ 773 MHz			dB	15	39	-	-
773 ~ 803 MHz			dB	50	55	-	Rx
1436 ~ 1496 MHz			dB	25	29	-	2fo
1565 ~ 1606 MHz			dB	22	25		GPS
2154 ~ 2244 MHz			dB	28	32		3fo
2400 ~ 2500 MHz			dB	30	38		ISM

ANT to Rx

Parameters Description			Unit	Minimum	Typical	Maximum	Note
Insertion Loss		773 ~ 803 MHz	dB(*1)	-	1.9	2.5	
		773.25 ~ 802.75 MHz			1.8	2.3	
Ripple		773 ~ 803 MHz	dB	-	0.8	2.0	
VSWR	ANT	773 ~ 803 MHz	-	-	1.8	2.0	
	Rx		-	-	1.7	2.0	
Attenuation:							
718 ~ 748 MHz			dB	50	63	-	Tx-
2400 ~ 2500 MHz			dB	30	73	-	ISM

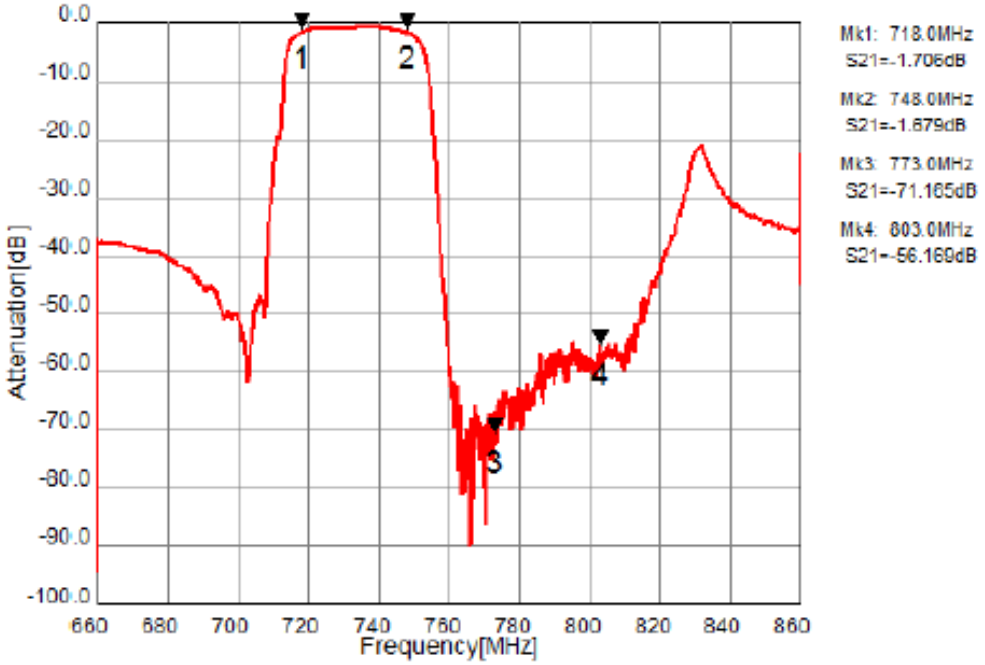
Tx to Rx

Isolation	718 ~ 748 MHz	dB	60	63	-	Tx
	773 ~ 803 MHz	dB	55	60	-	Rx

(*1) De-embedded test fixture.

C. Frequency Characteristics:

Tx to Ant



Ant to Rx

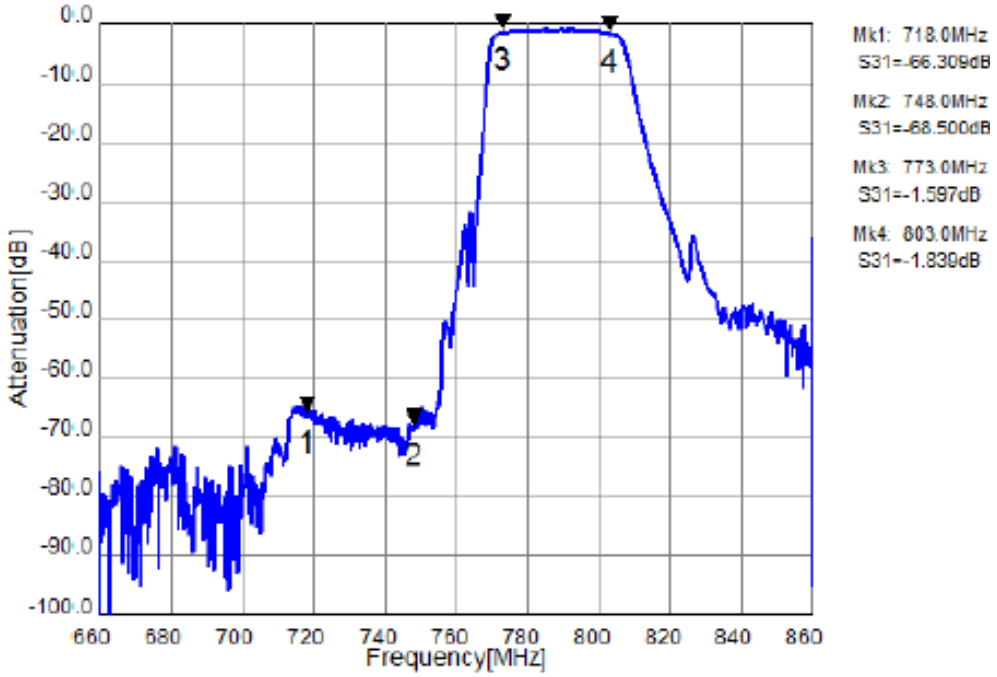
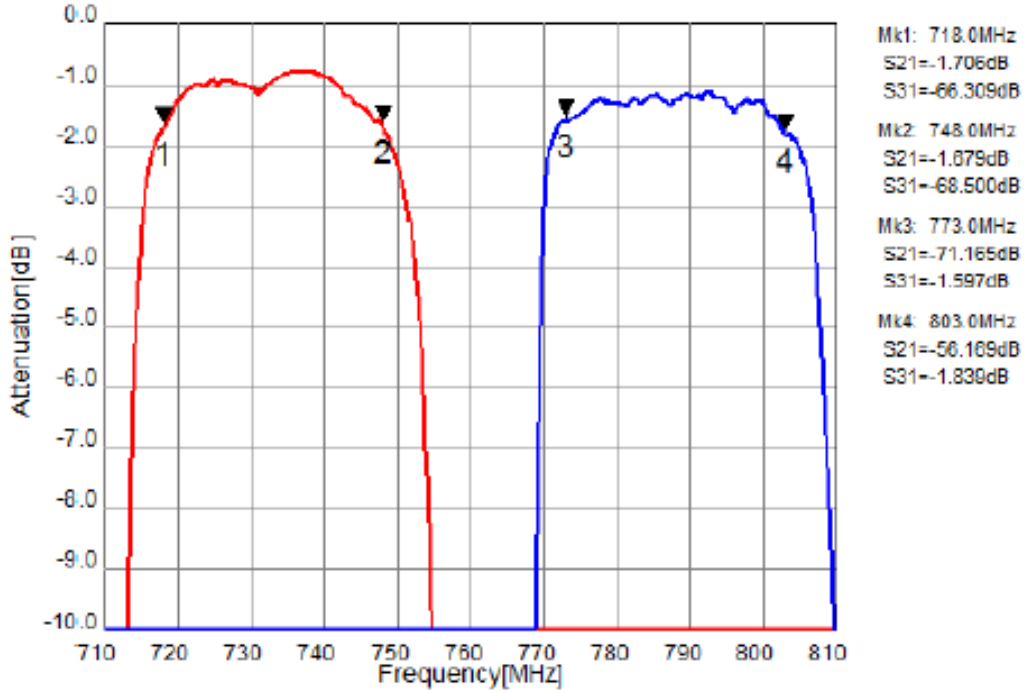


Figure 3-1. Electrical Characteristics

Tx to Ant, Ant to Rx



Tx to Rx Isolation

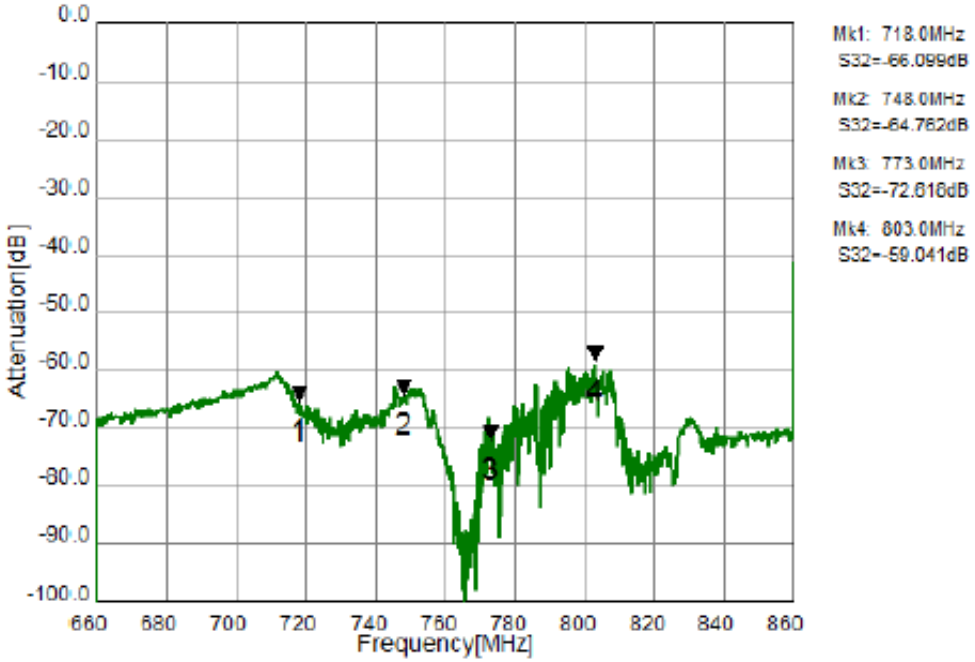
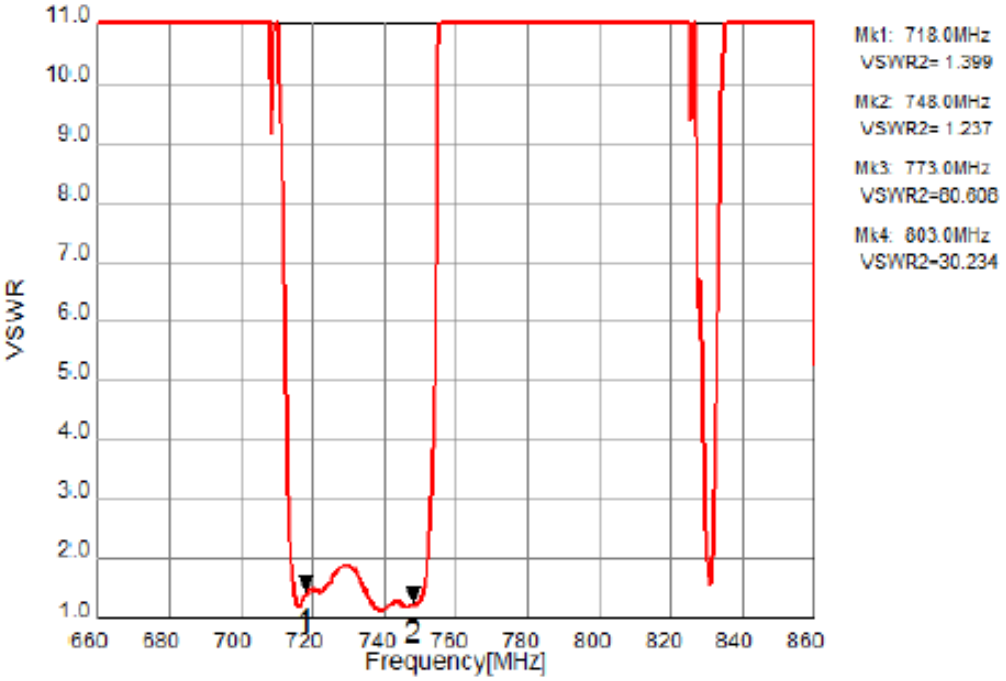


Figure 3-2. Electrical Characteristics

Tx Port



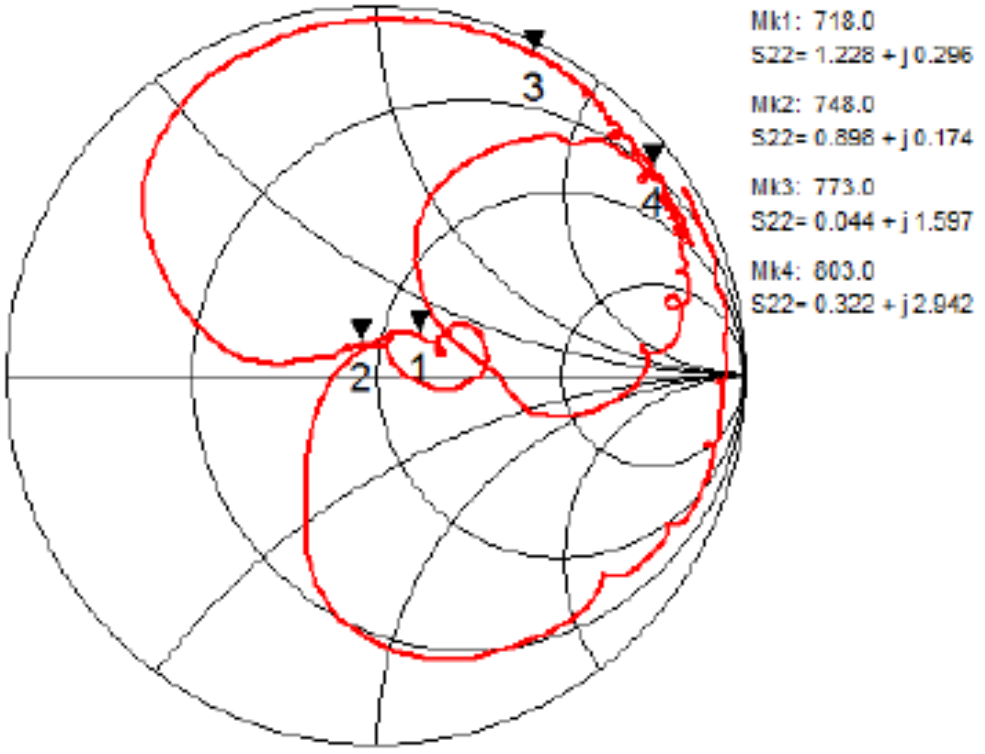
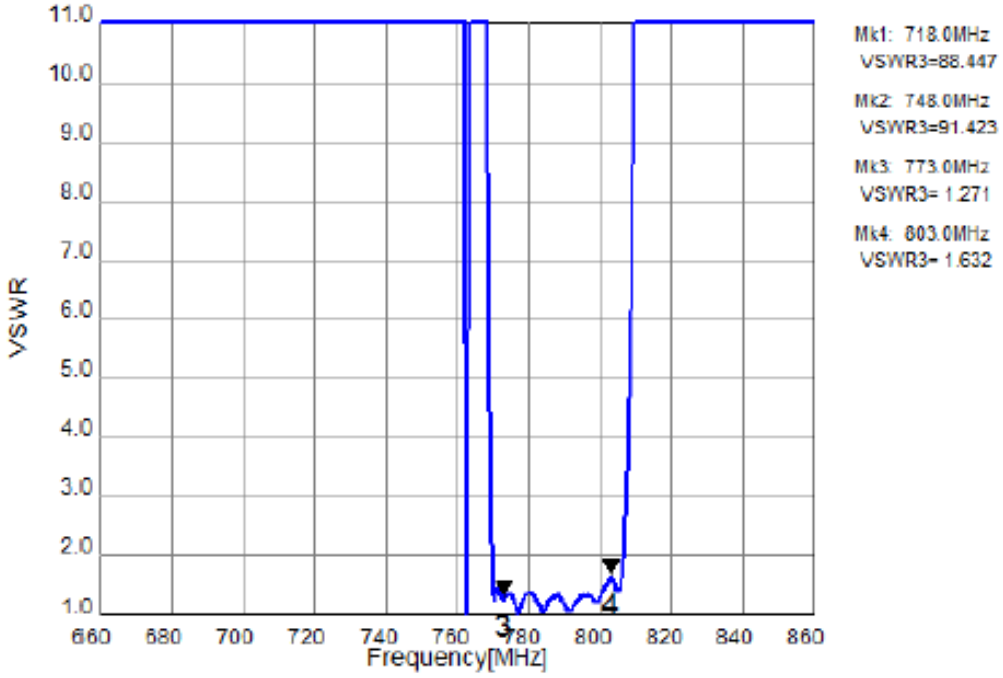


Figure 3-3. Electrical Characteristics

Rx Port



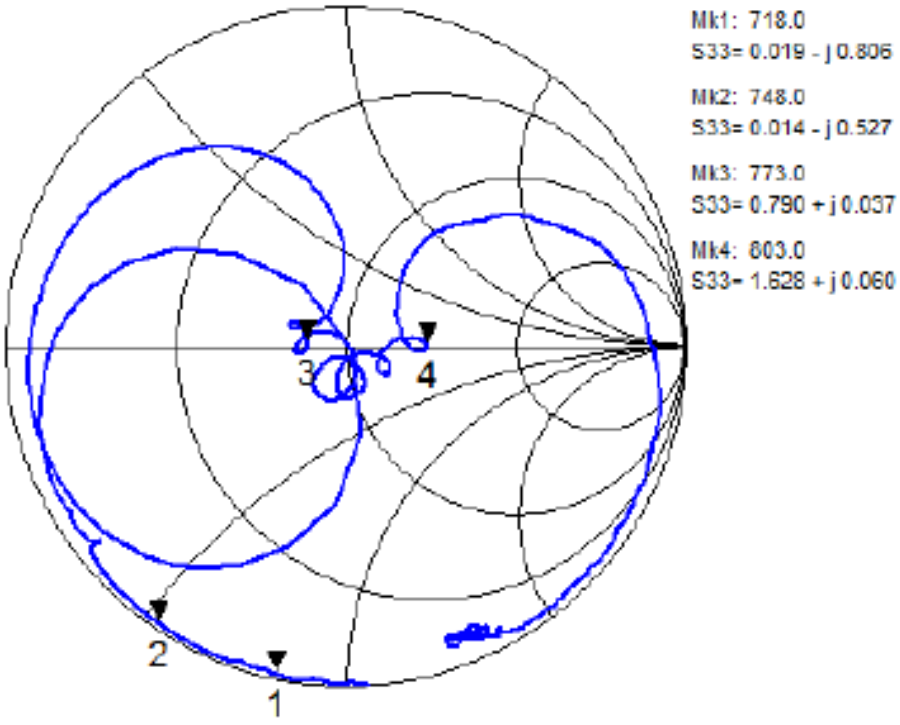
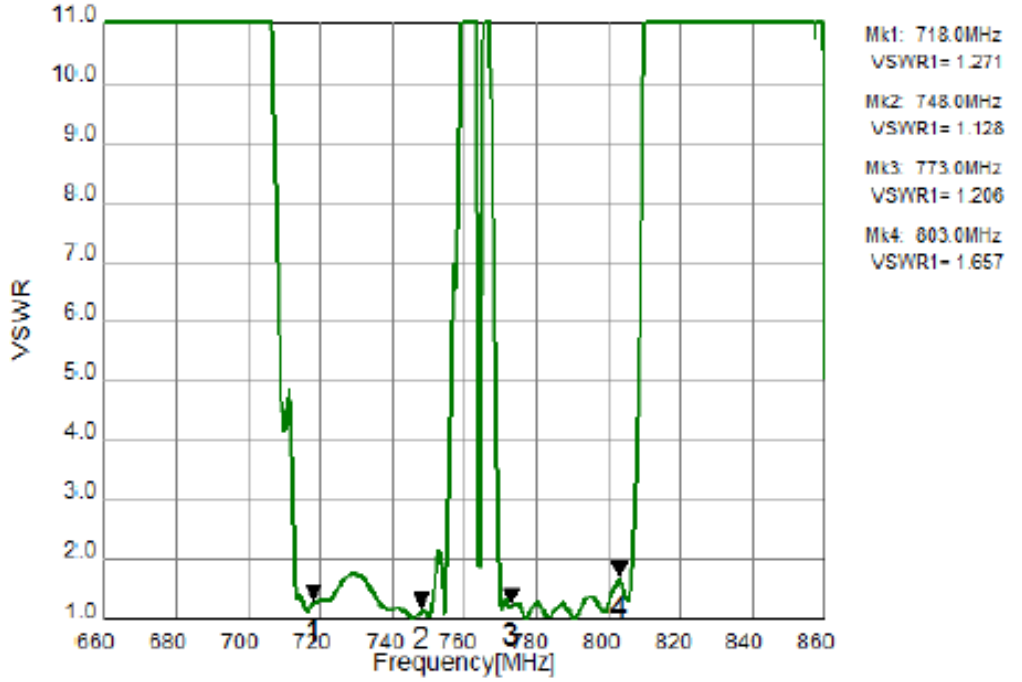


Figure 3-4. Electrical Characteristics

Ant Port



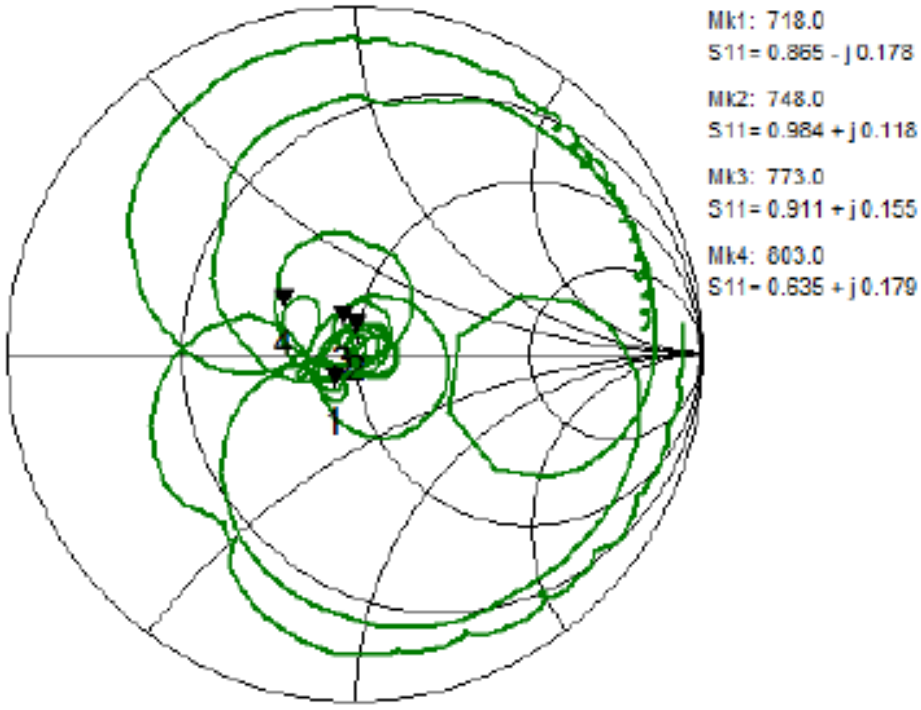
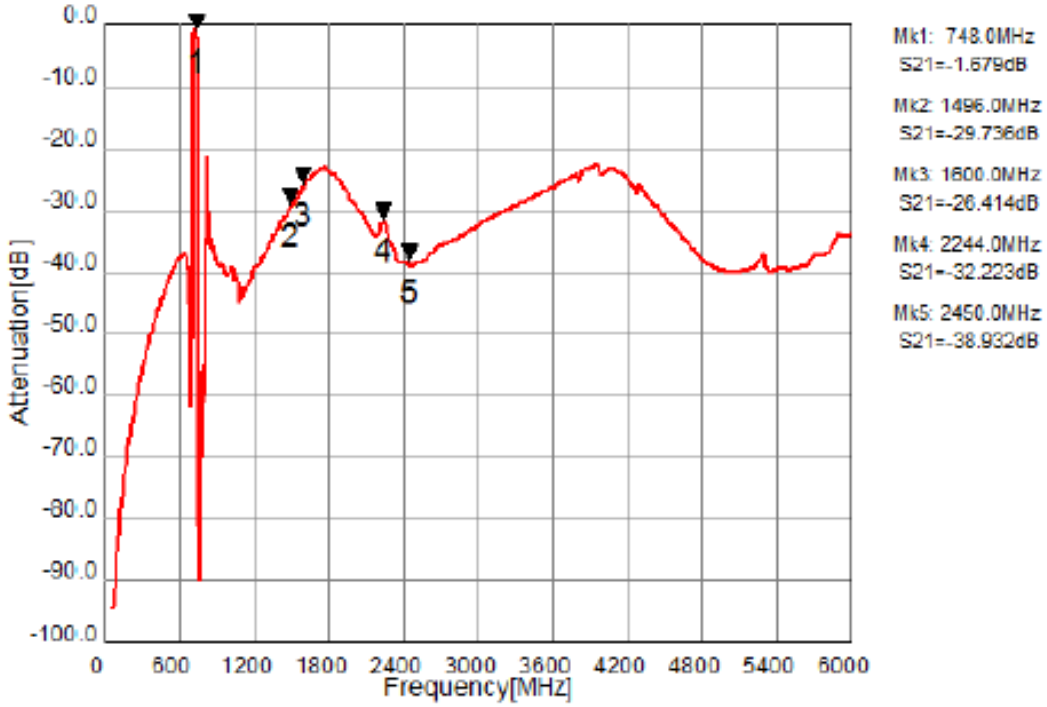


Figure 3-5. Electrical Characteristics

Tx to Ant (Wide span)



Ant to Rx (Wide span)

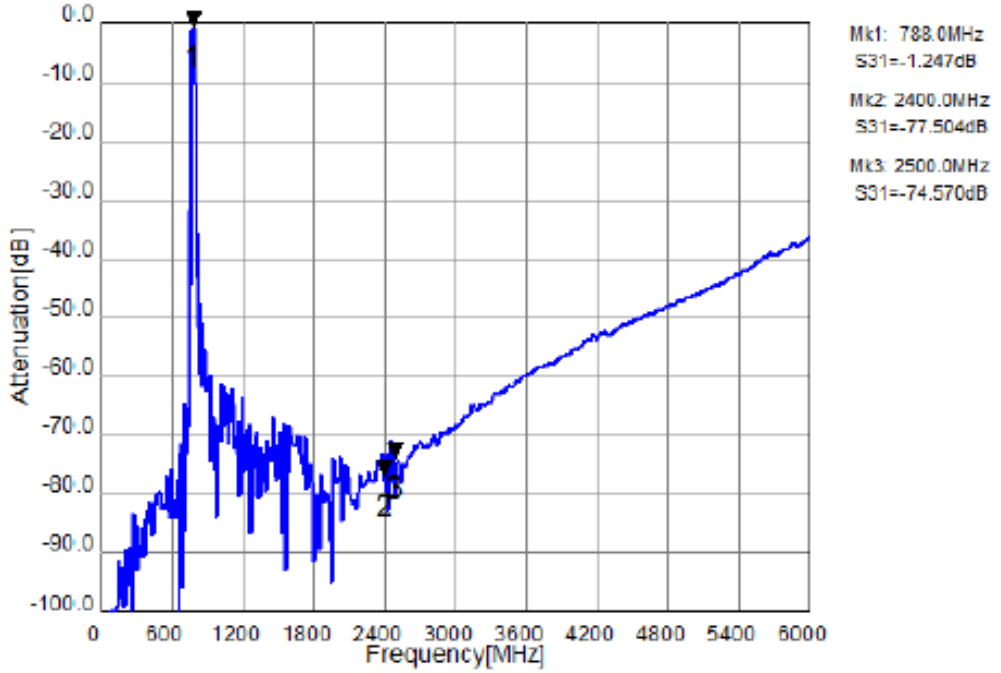
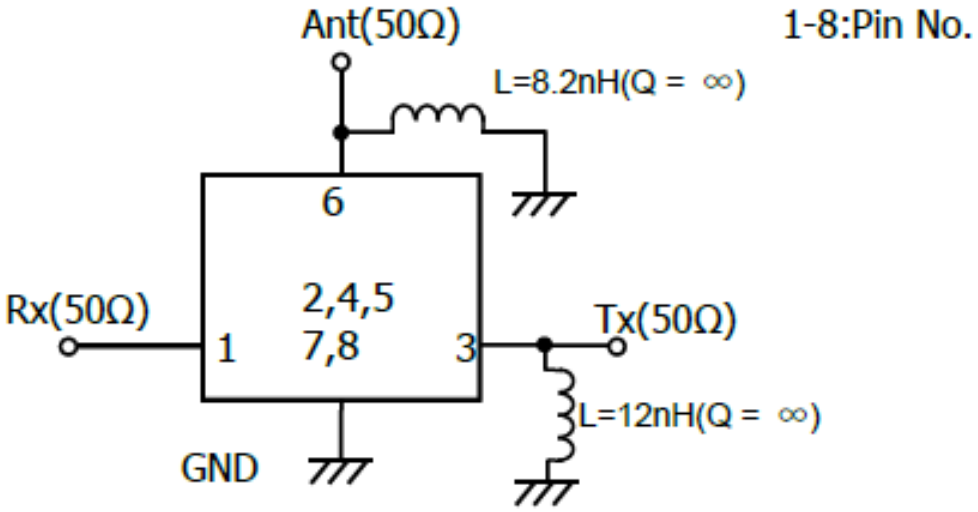


Figure 3-6. Electrical Characteristics

D. MEASUREMENT CIRCUIT:



Recommended foot print pattern

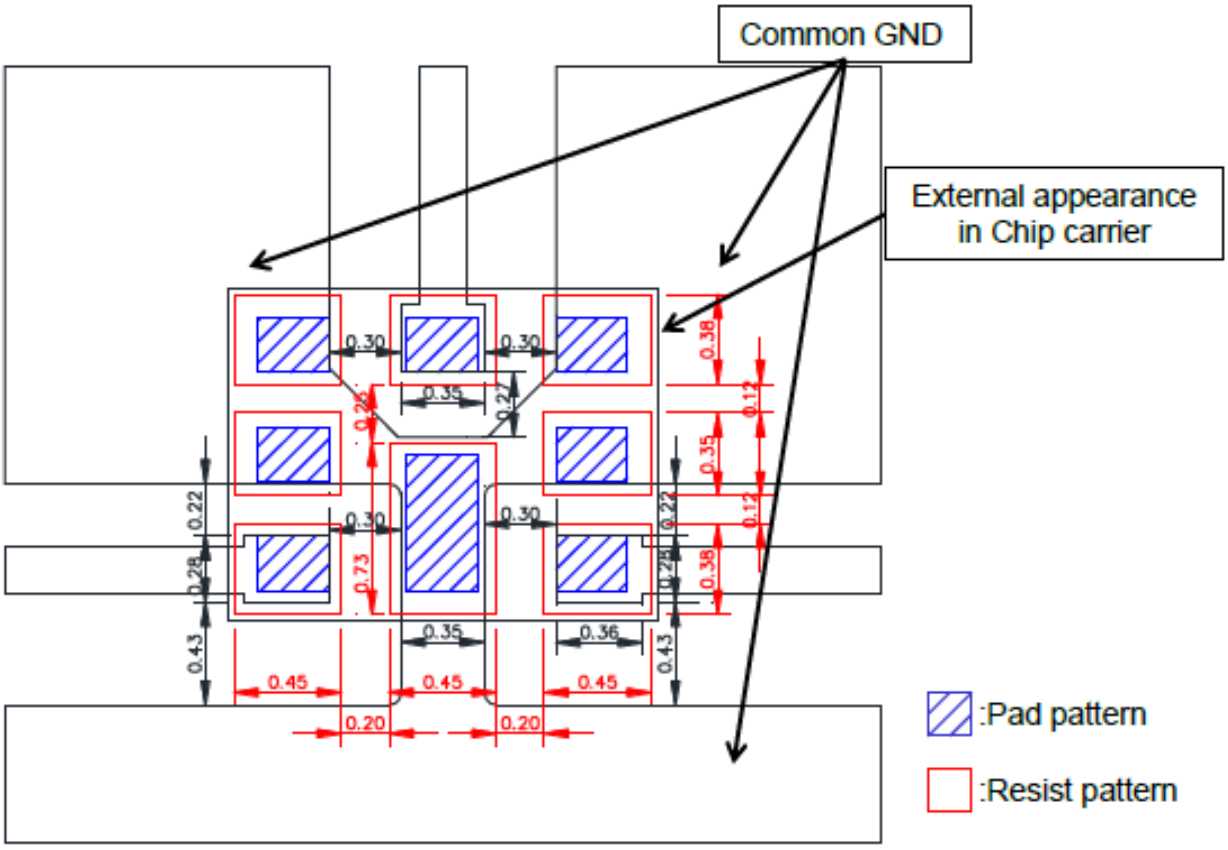
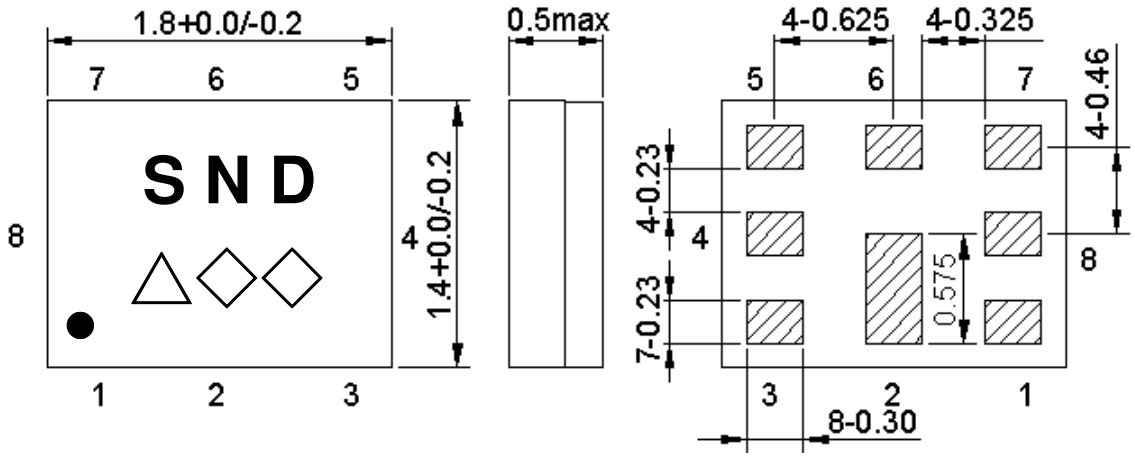


Figure 2. Recommended foot print pattern

E.OUTLINE DRAWING: (Mass Production)



Marking name : **ND**

△: Date code(2016 May → s ,…….., 2019 Dec→m.)

◇◇: Lot Code.

Product Date Code. Follow below table.

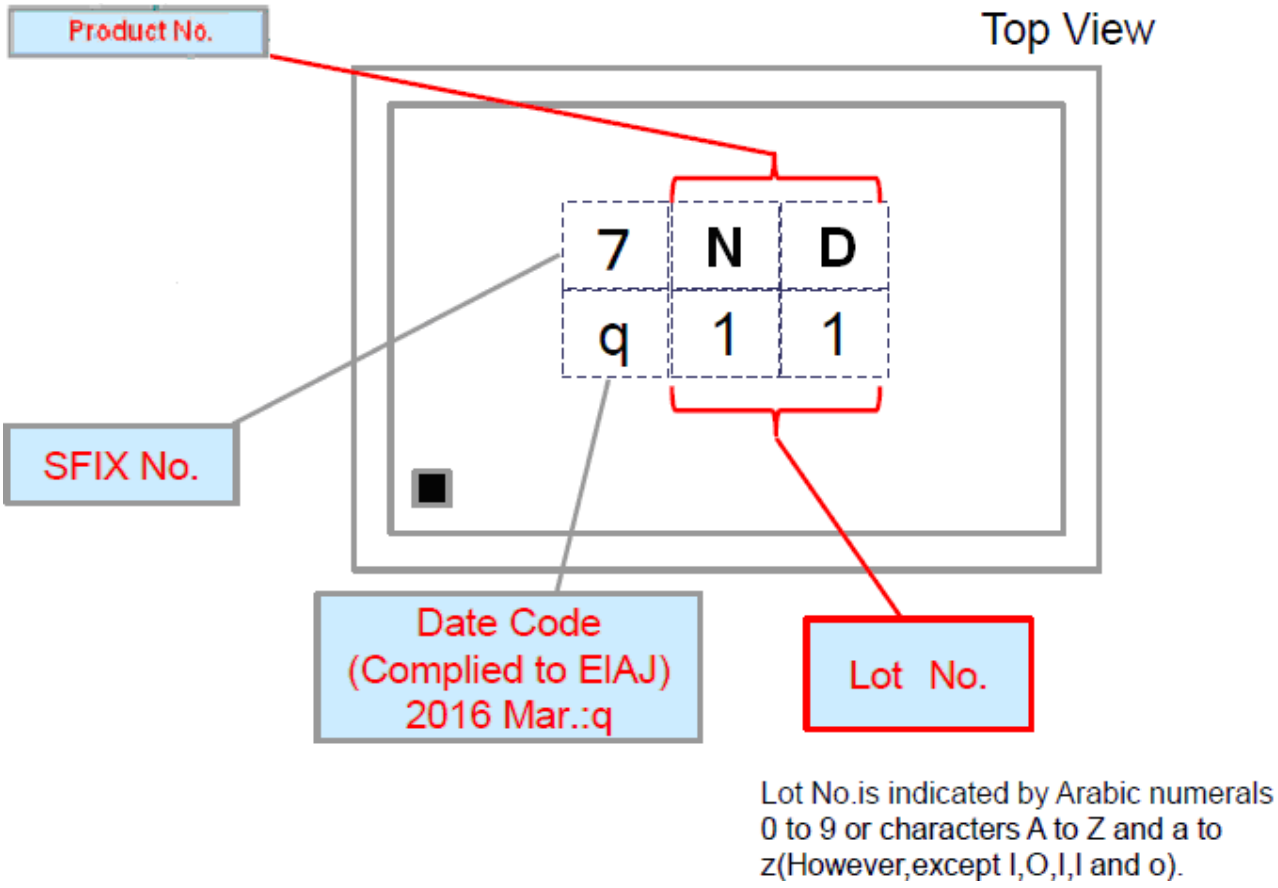
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m

Pin assignment

Pin No.	Pin name	Description
1	Rx	Receiver
2	GND	Ground
3	Tx	Transmitter
4	GND	Ground
5	GND	Ground
6	Ant	Antenna
7	GND	Ground
8	GND	Ground

Figure 1. Dimensions and Pin assignment

Top View (Sample Production):

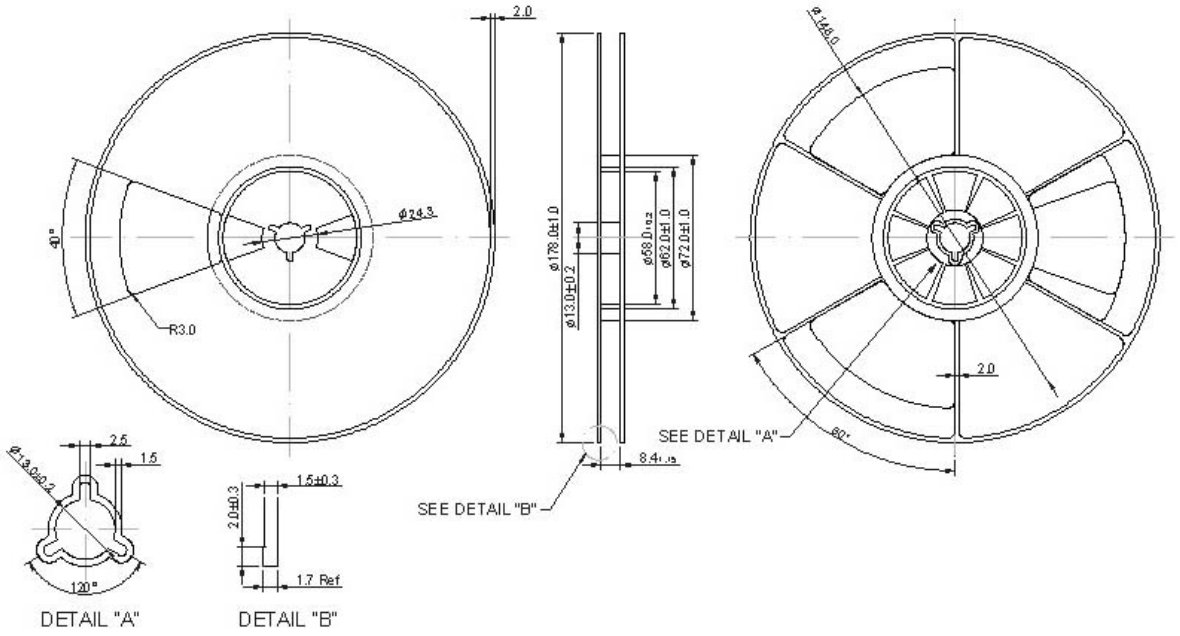


Lot No.is indicated by Arabic numerals 0 to 9 or characters A to Z and a to z(However,except I,O,l,I and o).

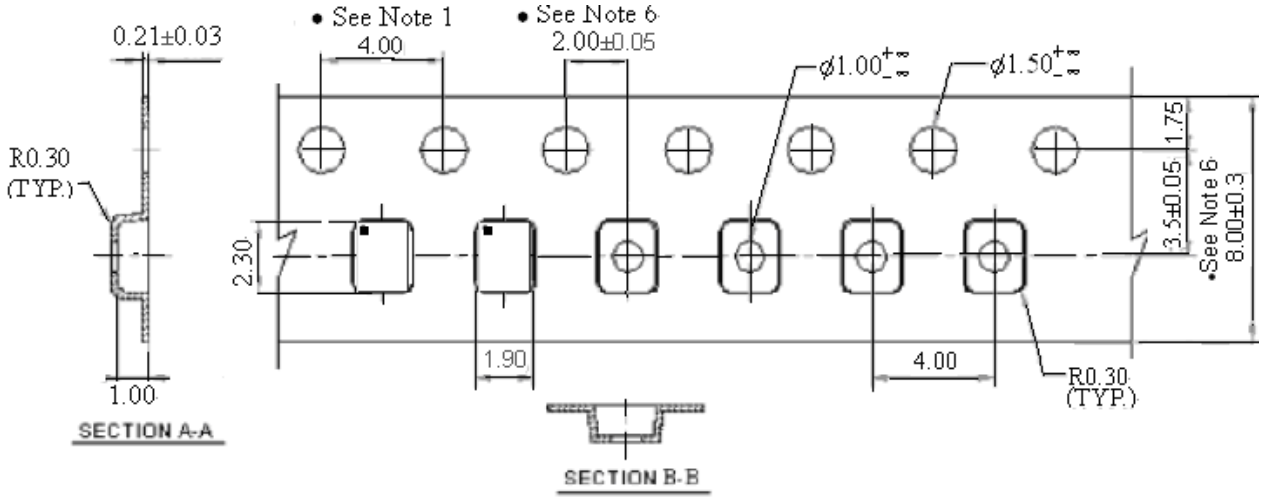
F. <u>PACKING:</u>

1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



2.TAPE DIMENSION



G. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.

