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.: TF0159B (This part is compliant with AEC-Q200)

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen _____

Approved by:_____ Andy Yu _____

Date:_____ 01 . 07 . 2020 _____

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.: TF0159B REV. No.: 1.0

A. MAXIMUM RATING:

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (**ESD**)

1. Input power : 29dBm (Ta=+50deg C,50000h,CW)
2. Maximum DC Voltage: +/-5 V
3. Operating temperature range: -40 ℃ to +85 ℃
4. Storage temperature range: -55 ℃ to +125 ℃
5. Moisture Sensitivity Level: Level 3 (MSL 3)
6. ESD 100V(MM) 200V(HBM)

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(f_{T0}=733 MHz)

Parameters Description			Unit	Minimum	Typical	Maximum	Note
Insertion Loss		718 ~ 748 MHz	dB(*1)	-	1.8	3.6	
		718.25 ~ 747.75 MHz			1.7	3.2	
Ripple		718 ~ 748 MHz	dB	-	1.1	2.9	
VSWR	Tx	718 ~ 748 MHz	-	-	1.9	2.3	
	ANT		-	-	1.8	2.2	
Attenuation:							
10 ~ 698 MHz			dB	32	36	-	-
698 ~ 710 MHz			dB	15	26	-	-
758 ~ 773 MHz			dB	10	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(f_{T0}=788 MHz)

Parameters Description			Unit	Minimum	Typical	Maximum	Note
Insertion Loss		773 ~ 803 MHz	dB(*1)	-	1.9	3.6	
		773.25 ~ 802.75 MHz			1.8	3.2	
Ripple		773 ~ 803 MHz	dB	-	0.8	2.9	
VSWR	ANT	773 ~ 803 MHz	-	-	1.8	2.5	
	Rx		-	-	1.7	2.5	
Attenuation:							
718 ~ 748 MHz			dB	50	63	-	Tx-
2400 ~ 2500 MHz			dB	30	73	-	ISM

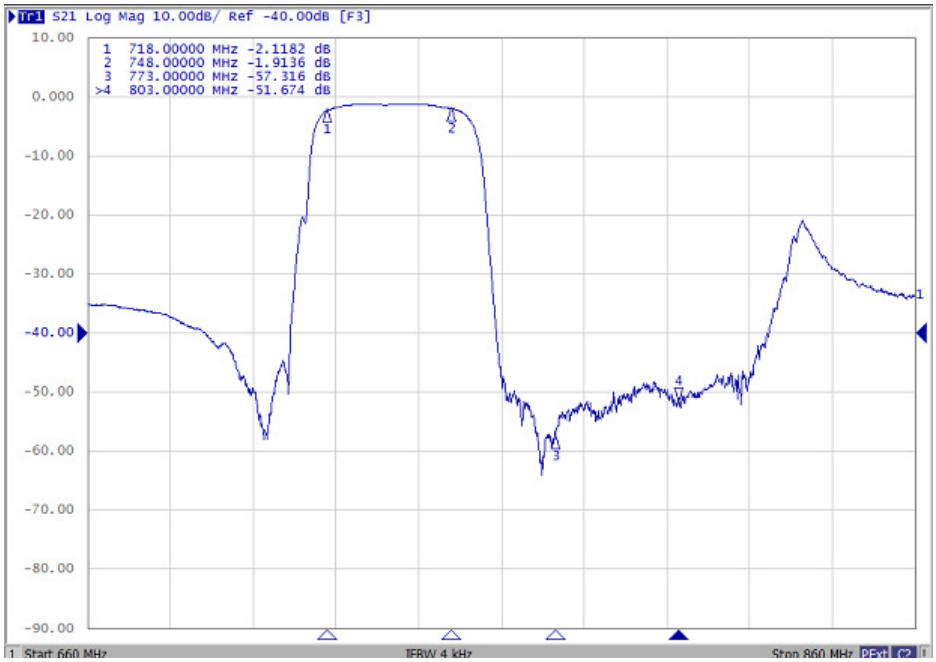
Tx to Rx

Isolation	718 ~ 748 MHz	dB	57	63	-	Tx
	773 ~ 803 MHz	dB	53	60	-	Rx

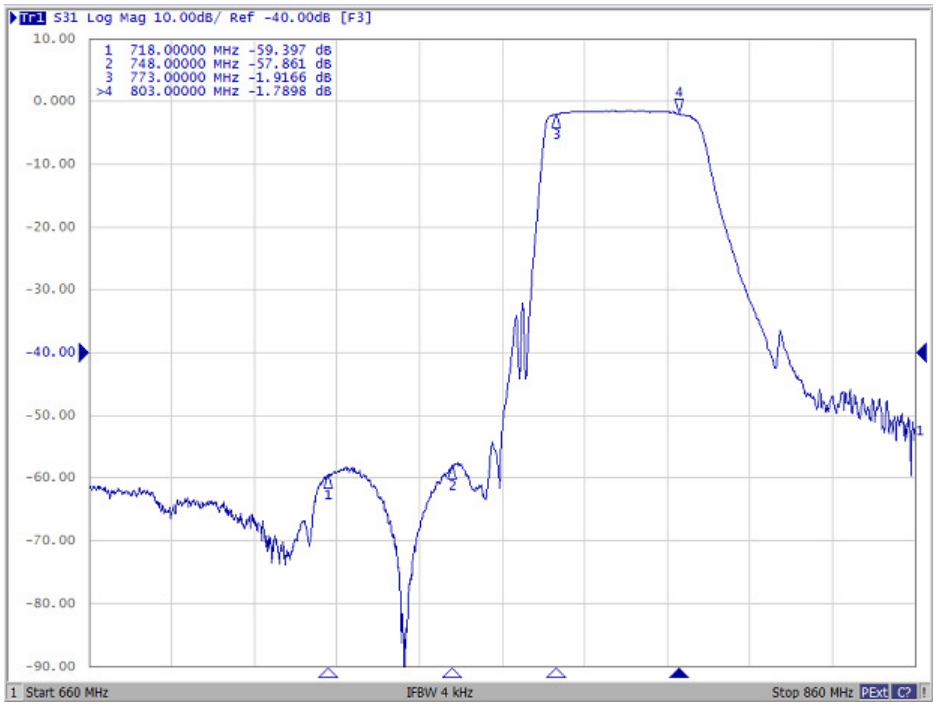
(*1) De-embedded test fixture.

C. **Frequency Characteristics**:

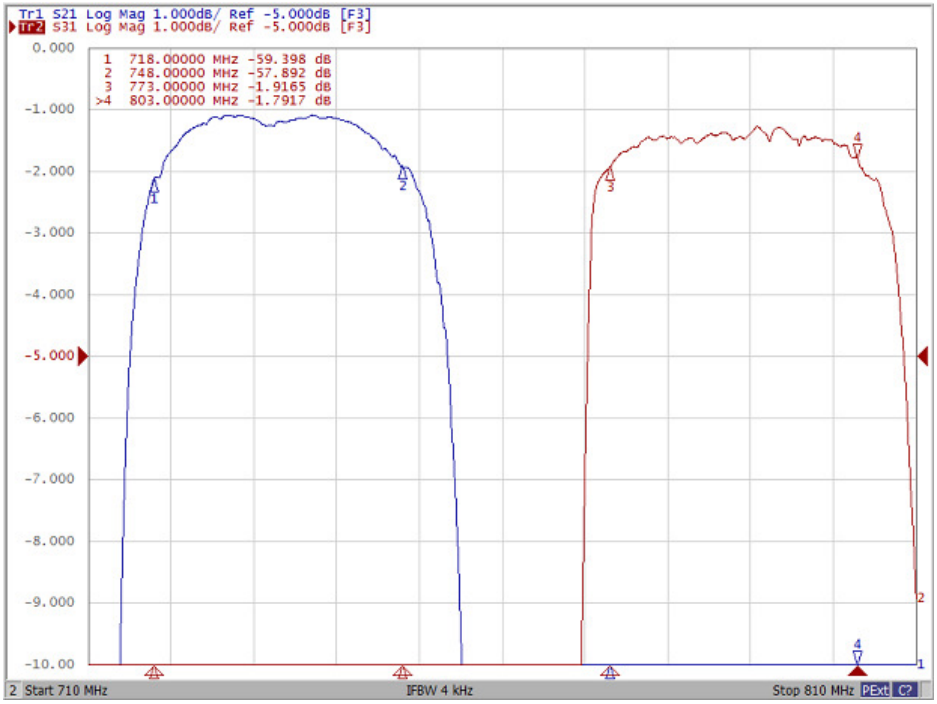
Tx to Ant



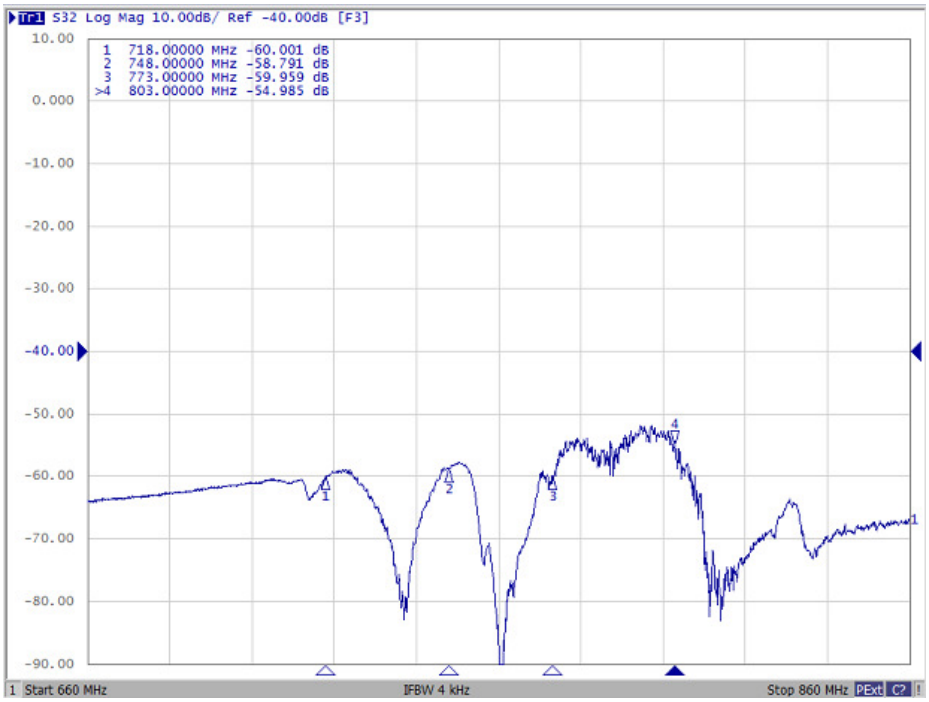
Ant to Rx



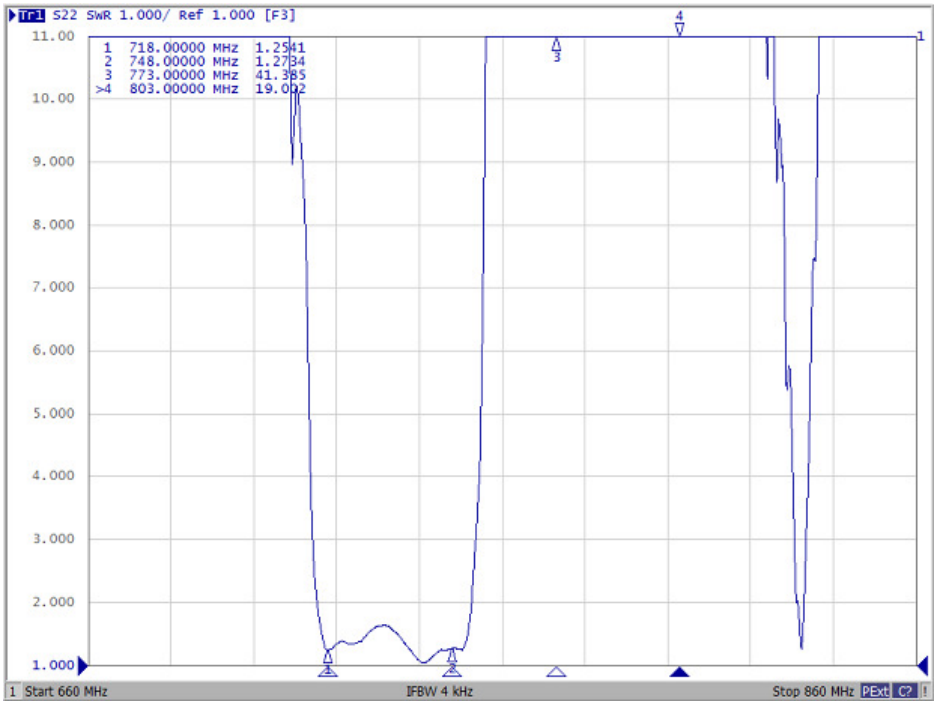
Ripple Deviation



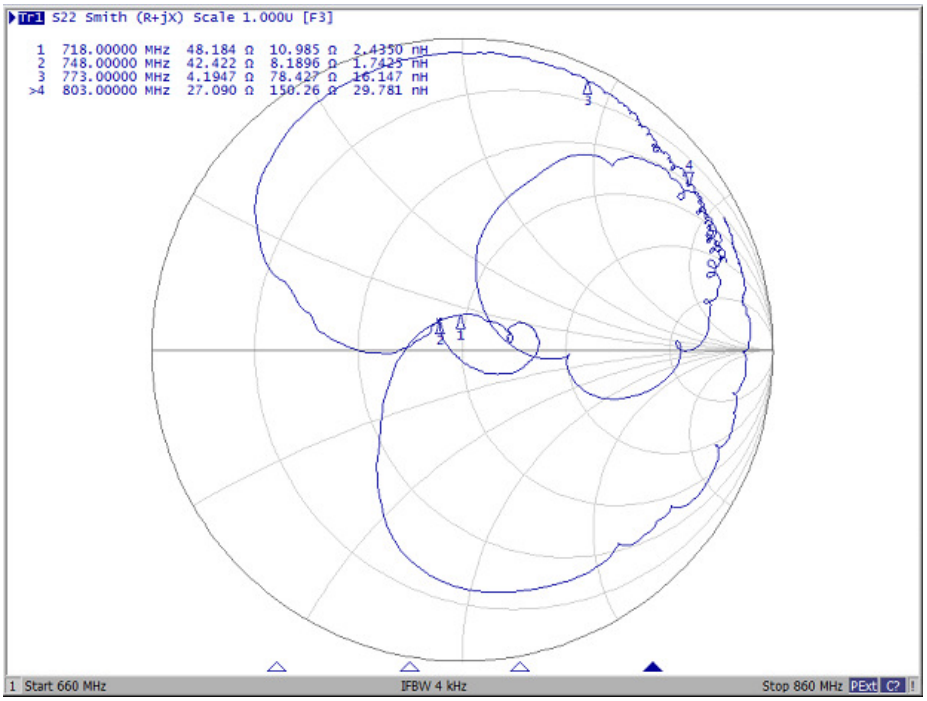
Isolation



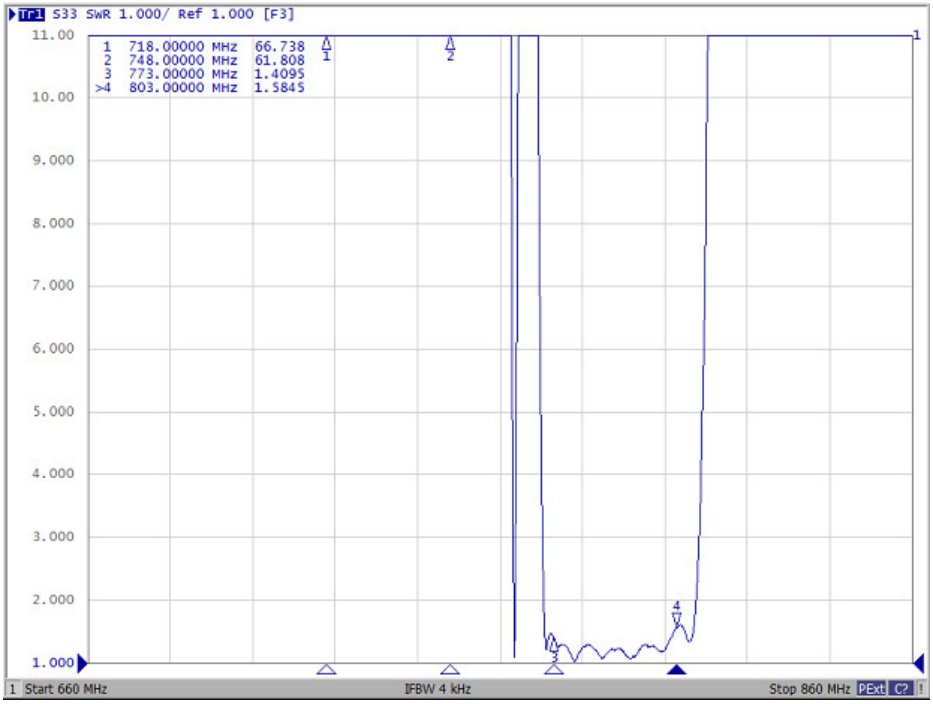
VSWR (Tx Port)



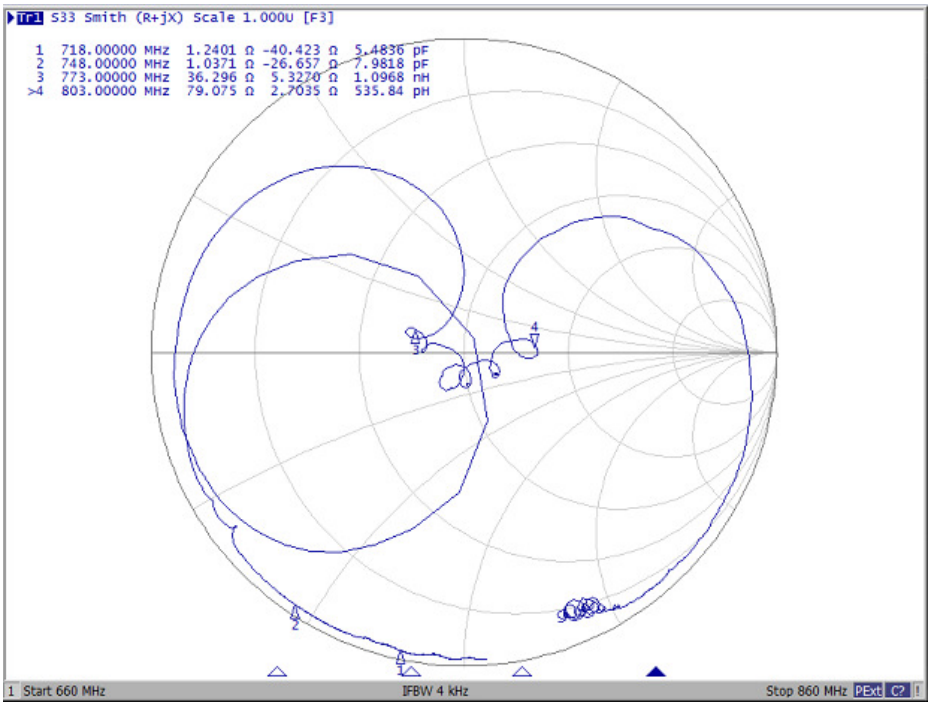
Smith Chart (Tx Port)



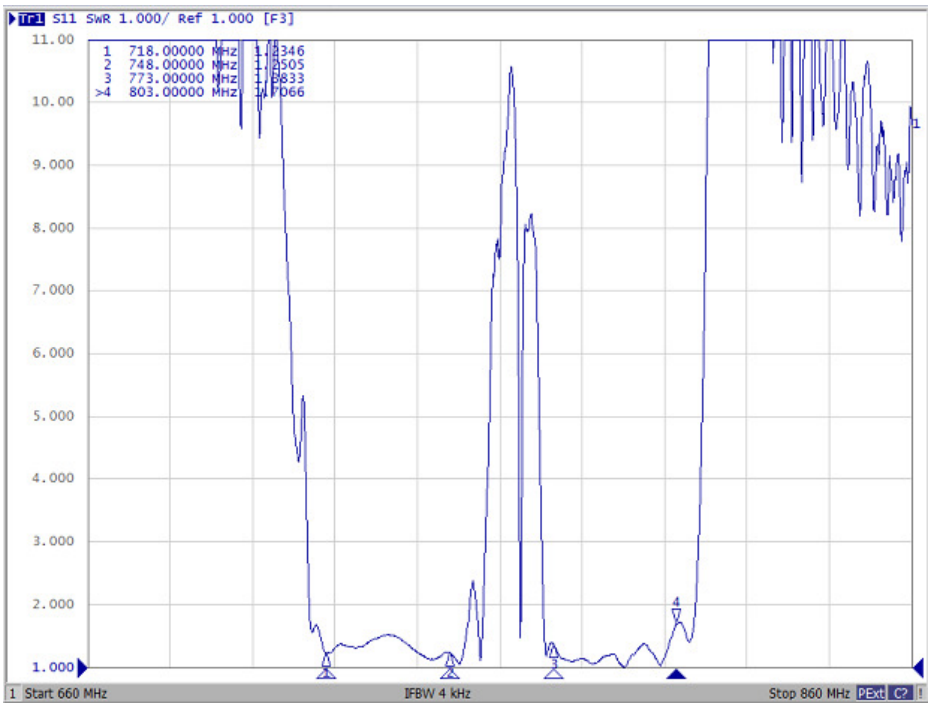
VSWR (Rx Port)



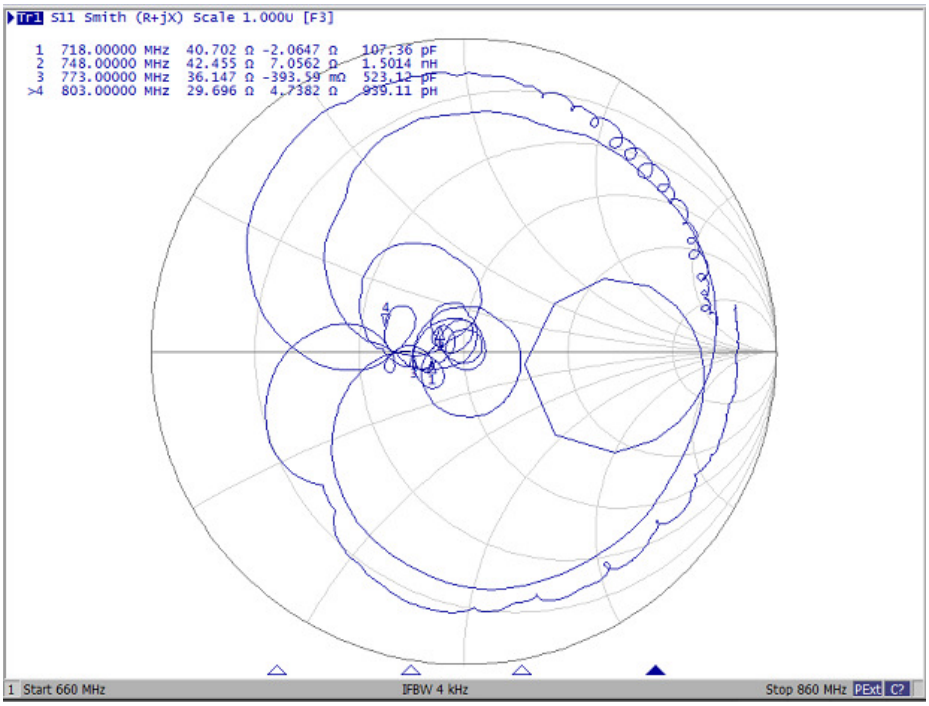
Smith Chart (Rx Port)



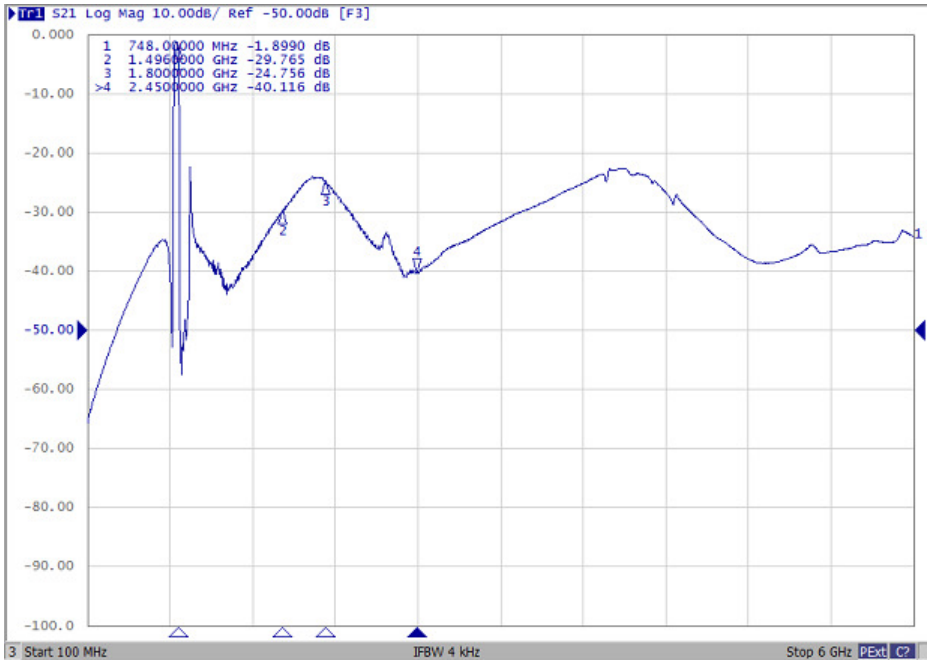
VSWR (ANT Port)



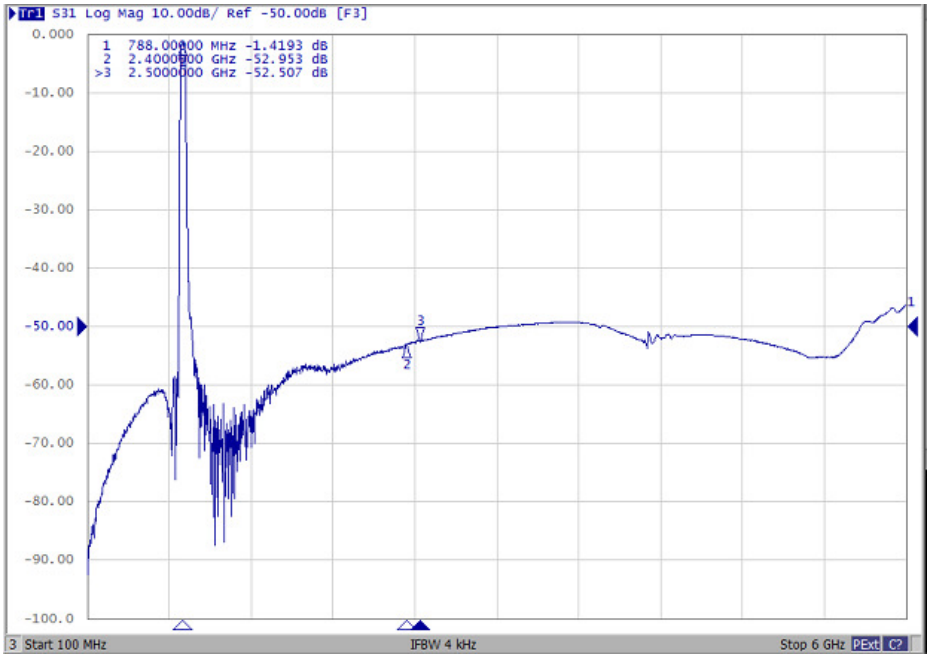
Smith Chart (ANT Port)



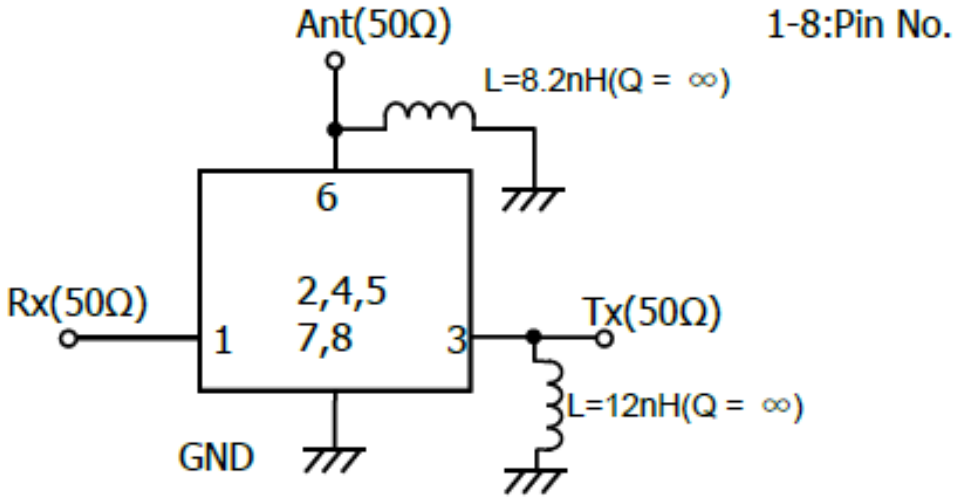
Tx to Ant (Wide Span)



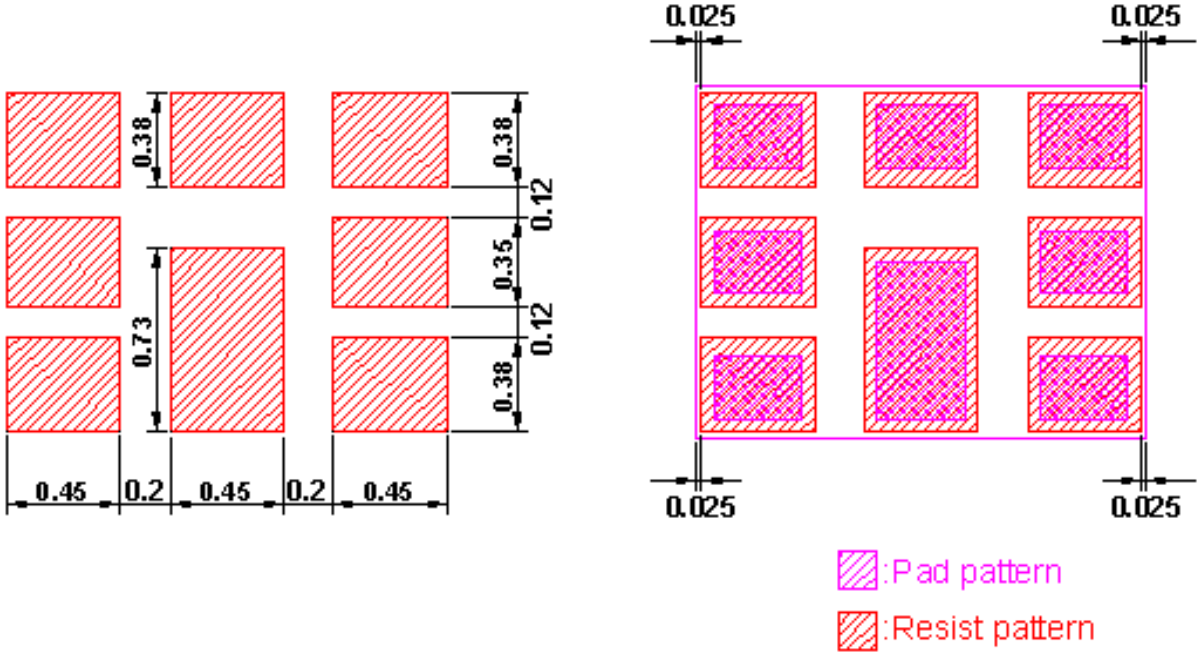
Ant to Rx (Wide Span)



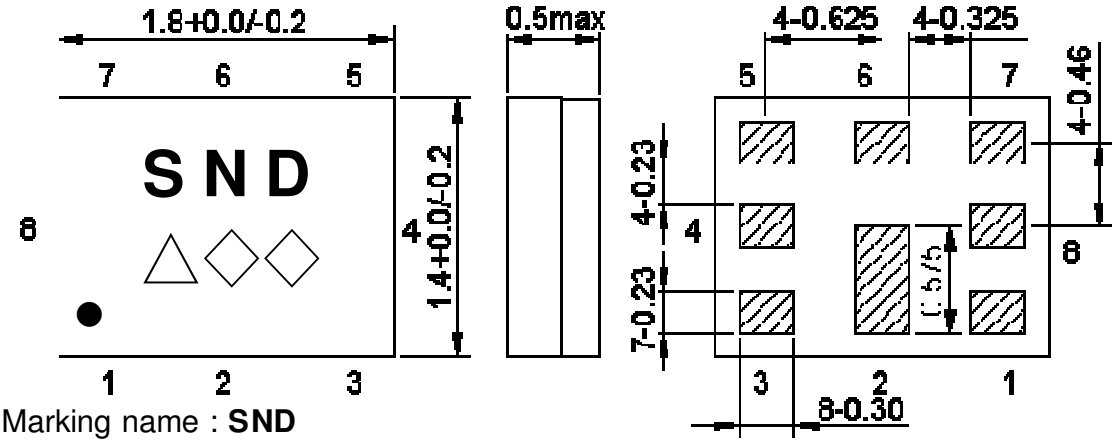
D .Evaluation Circuit



E . FOOTPRINT:



F.OUTLINE DRAWING:



Marking name : **SND**

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

◇◇: Lot Code.

Date Code: Follow below table. (4-year cycle)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019 / 2023	a	b	c	d	e	f	g	h	j	k	l	m
2020 / 2024	n	p	q	r	s	t	u	v	w	x	y	z
2021 / 2025	A	B	C	D	E	F	G	H	J	K	L	M
2022 / 2026	N	P	Q	R	S	T	U	∇	W	X	Y	Z

Pin assignment

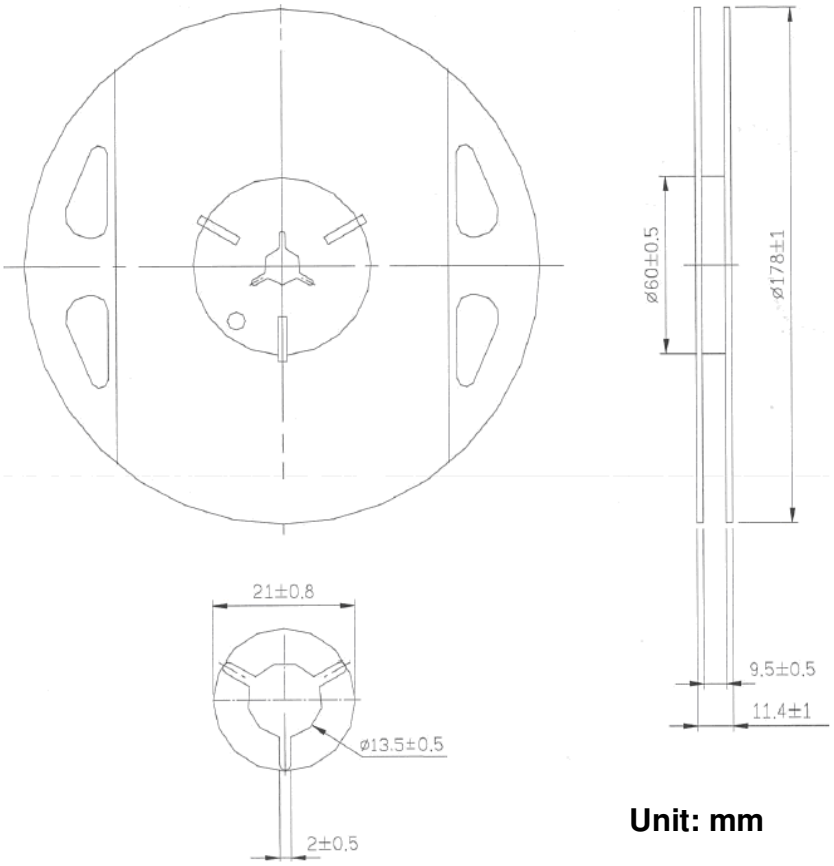
Pin No.	Pin name	Description
1	Rx	Receiver
2	GND	Ground
3	Tx	Transmitter
4	GND	Ground
5	GND	Ground
6	Ant	Antenna
7	GND	Ground
8	GND	Ground

Figure 1. Dimensions and Pin assignment

G. PACKING:

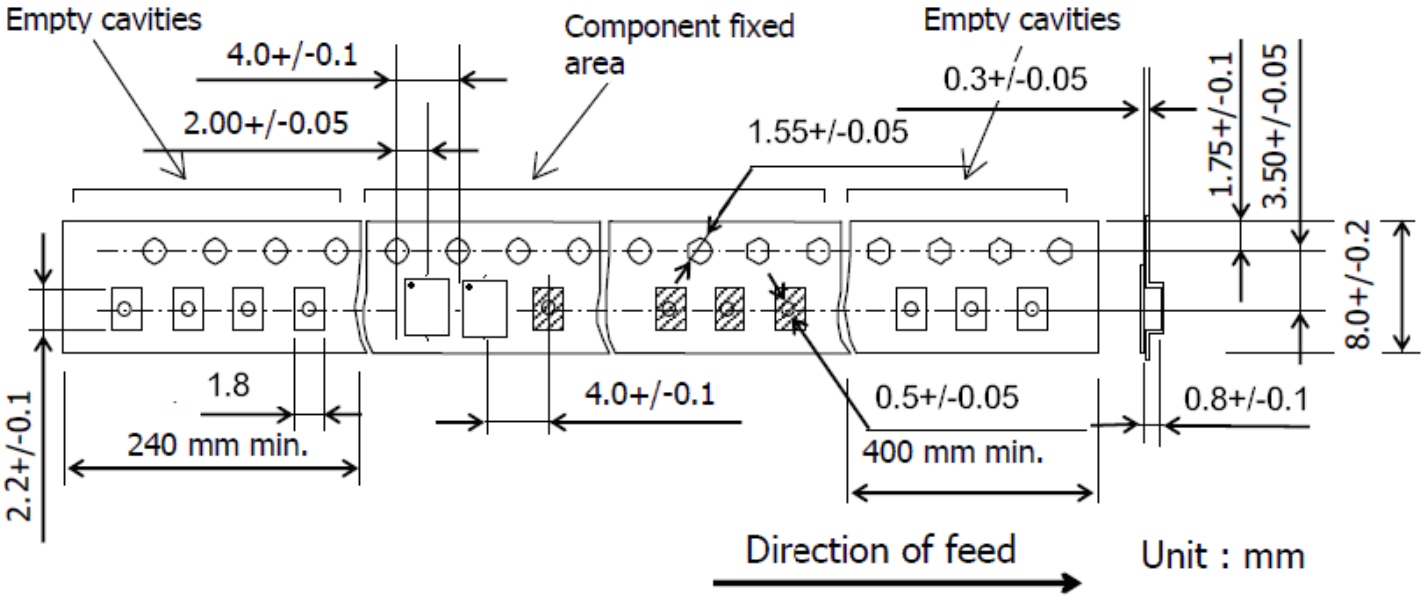
1. REEL DIMENSION

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



Unit: mm

2. TAPE DIMENSION



H. 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 245~260℃ peak (min. 10sec).
4. Time : 2 times.