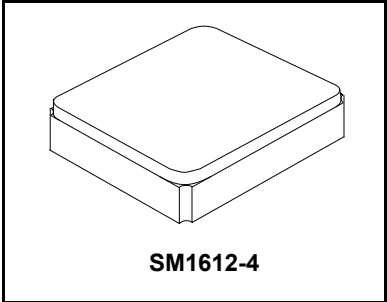


SF2690QM

**2535/2655 MHz
SAW Duplexer**



MAXIMUM RATING:

- Input power : 30dBm (Ta=+50°C,1000hmax,CW)
- Input power : 29dBm (Ta=+50°C,5000hmax,CW)
- Maximum DC Voltage: 5V
- Operating temperature range: -30 °C to +85 °C
- Storage temperature range: -40 °C to +100 °C
- Moisture Sensitivity Level: Level 1 (MSL 1)
- ESD 50V(MM) 100V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50 Ω(Single-ended)
 Terminating impedance (Rx Port): 50 Ω (Single-ended)
 Terminating impedance (Ant Port): 50//3.3nH Ω (Single-ended)

Tx to ANT (f_{T0}=2535 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks	
Insertion Loss	2500 ~ 2535MHz	dB	-	2.1	3.2		
	2535 ~ 2570MHz	dB	-	1.8	2.6		
Amplitude ripple	2500 ~ 2570MHz	dB	-	0.9	2.6		
Ripple (any 5MHz)	2500 ~ 2570MHz	dB	-	0.5	1.0		
		dB	-	0.5	1.4		
VSWR	Tx	880~915MHz	-	-	1.6	2.2	
	ANT	880~915MHz	-	-	1.5	2.3	
Attenuation:							
50~ 1606 MHz		dB	36	39	-		
1805 ~ 1880 MHz		dB	33	38	-		
1900 ~ 2025 MHz		dB	33	36	-		
2110 ~ 2170 MHz		dB	32	37	-		
2155 ~ 2200 MHz		dB	33	37			
2300 ~ 2400 MHz		dB	37	39			
2403 ~ 2421 MHz		dB(*1)	45	48			
2408 ~ 2426 MHz		dB(*1)	46	50			
2413 ~ 2431 MHz		dB(*1)	48	51			
2418 ~ 2436 MHz		dB(*1)	49	52			
2423 ~ 2441 MHz		dB(*1)	47	52			
2428 ~ 2446 MHz		dB(*1)	46	51			

2433 ~ 2451 MHz	dB(*1)	46	51		
2438 ~ 2456 MHz	dB(*1)	41	51		
2443 ~ 2461 MHz	dB(*1)	45	49		
2448 ~ 2466 MHz	dB(*1)	45	49		
2453 ~ 2471 MHz	dB(*1)	42	48		
2458 ~ 2476 MHz	dB(*1)	22	44		
2463 ~ 2481 MHz	dB(*1)	13	22		
2620 ~ 2690 MHz	dB	52	58		
3400 ~ 5000 MHz	dB	32	36		
5000 ~ 5140 MHz	dB	47	51		
5140 ~ 7710 MHz	dB	42	50		

ANT to Rx (f_{T0}=2655 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	2620 ~ 2655MHz	dB	-	1.9	2.8	
	2655 ~ 2690MHz	dB	-	1.7	2.6	
Amplitude ripple	2620 ~ 2690MHz	dB	-	0.7	1.8	
VSWR	ANT	-	-	1.7	2.0	
	Rx	-	-	1.8	2.2	

Attenuation:

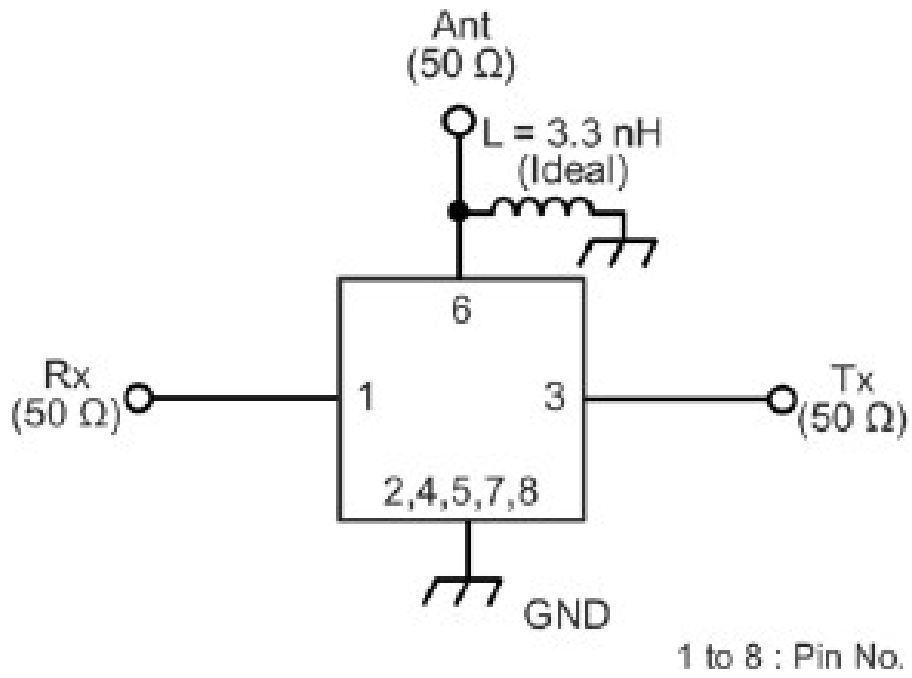
45 MHz	dB	60	90	-	
718 ~ 748 MHz	dB	53	59	-	
814 ~ 832 MHz	dB	51	57	-	
832 ~ 862 MHz	dB	51	60	-	
880 ~ 915 MHz	dB	50	56		
1710 ~ 1785 MHz	dB	40	46		
1920 ~ 1980 MHz	dB	39	46		
2400 ~ 2500 MHz	dB	45	54		
2402 ~ 2470 MHz	dB	45	54		
2500 ~ 2570 MHz	dB	47	56		
2570 ~ 2600 MHz	dB	1	6		
2775 ~ 2790 MHz	dB	51	55		
2775 ~ 6000 MHz	dB	45	53		
4900 ~ 5300 MHz	dB	55	60		
5300 ~ 5950 MHz	dB	53	58		
7620 ~ 7830 MHz	dB	43	50		
7860 ~ 8070 MHz	dB	42	48		

Tx to Rx

Isolation	2500 ~ 2535 MHz	dB	57	62	-	
	2535 ~ 2570 MHz	dB	53	57		
	2620 ~ 2655 MHz	dB	56	65		
	2655 ~ 2690 MHz	dB	52	59	-	

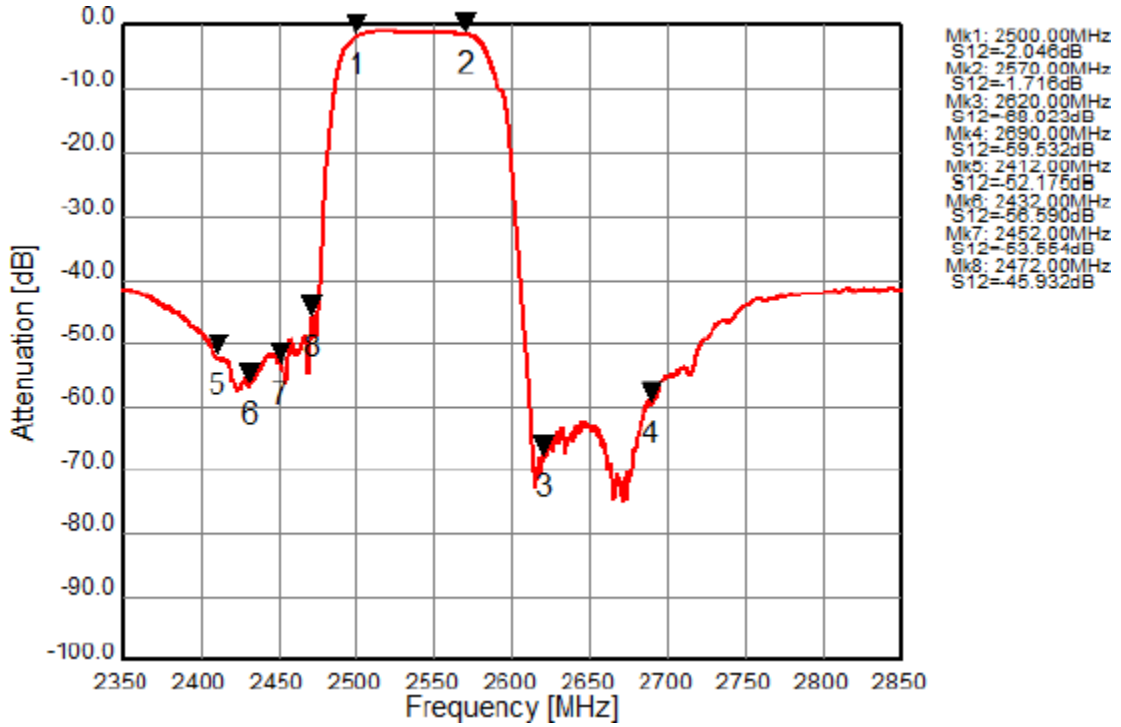
(*1)Integrated over 18MHz CH BW.

Evaluation Circuit

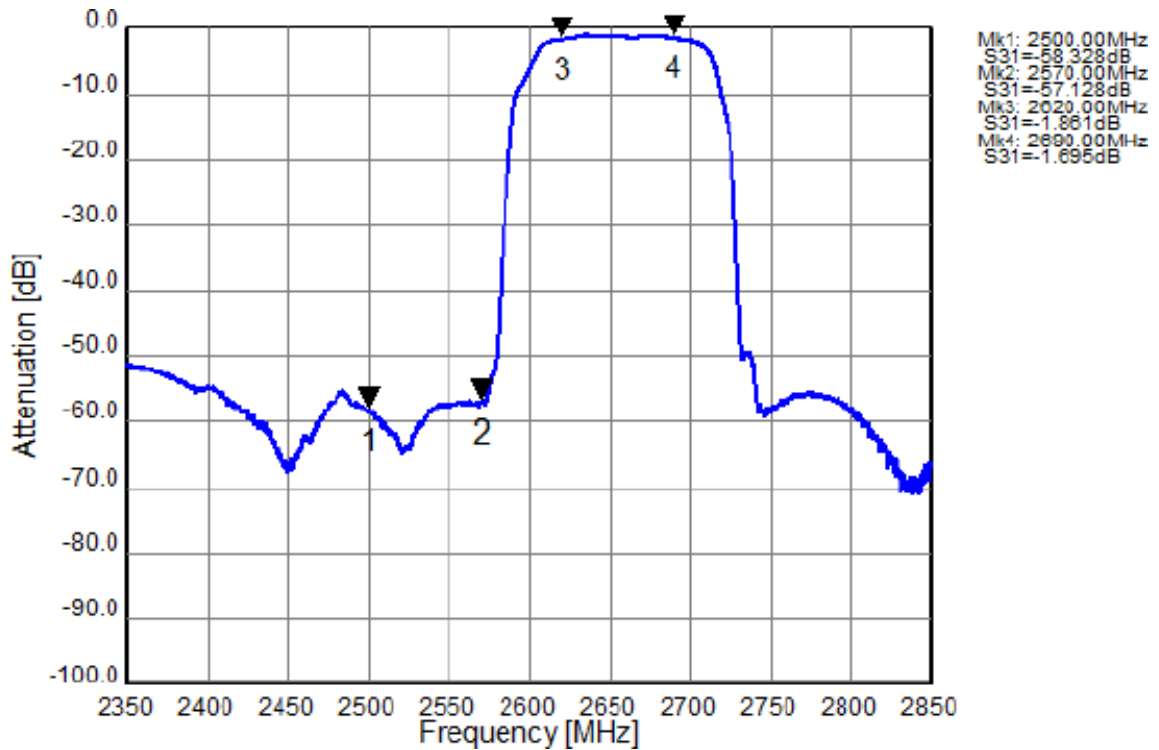


FREQUENCY CHARACTERISTICS:

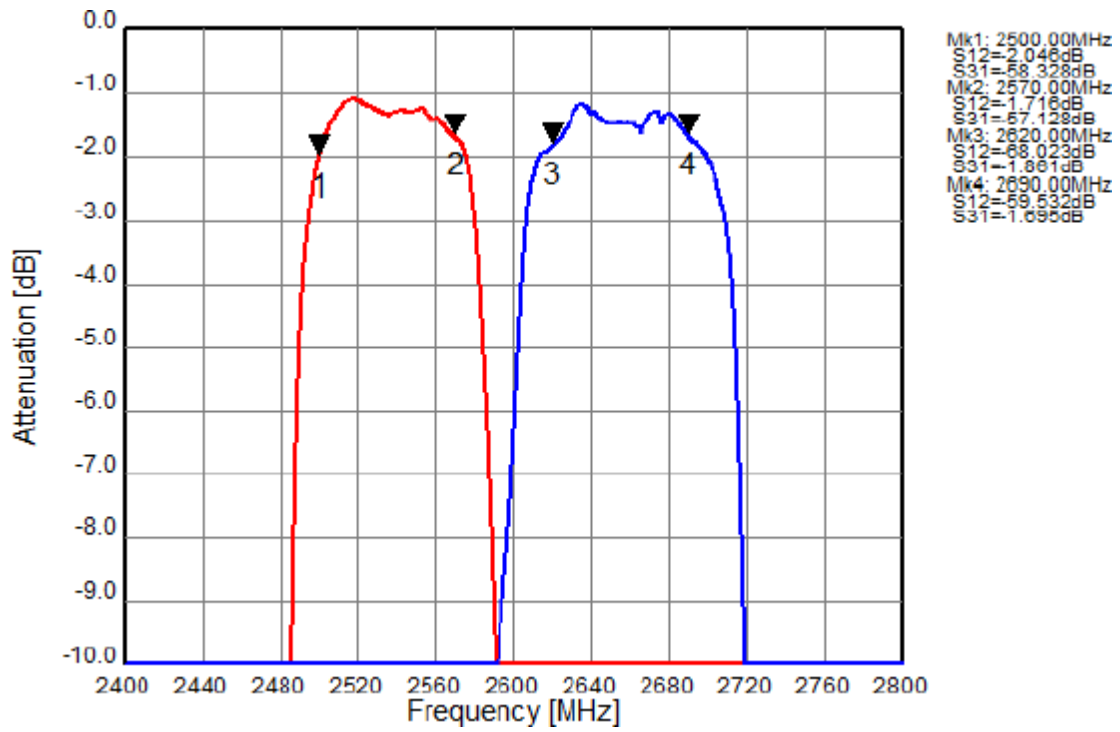
Tx to Ant



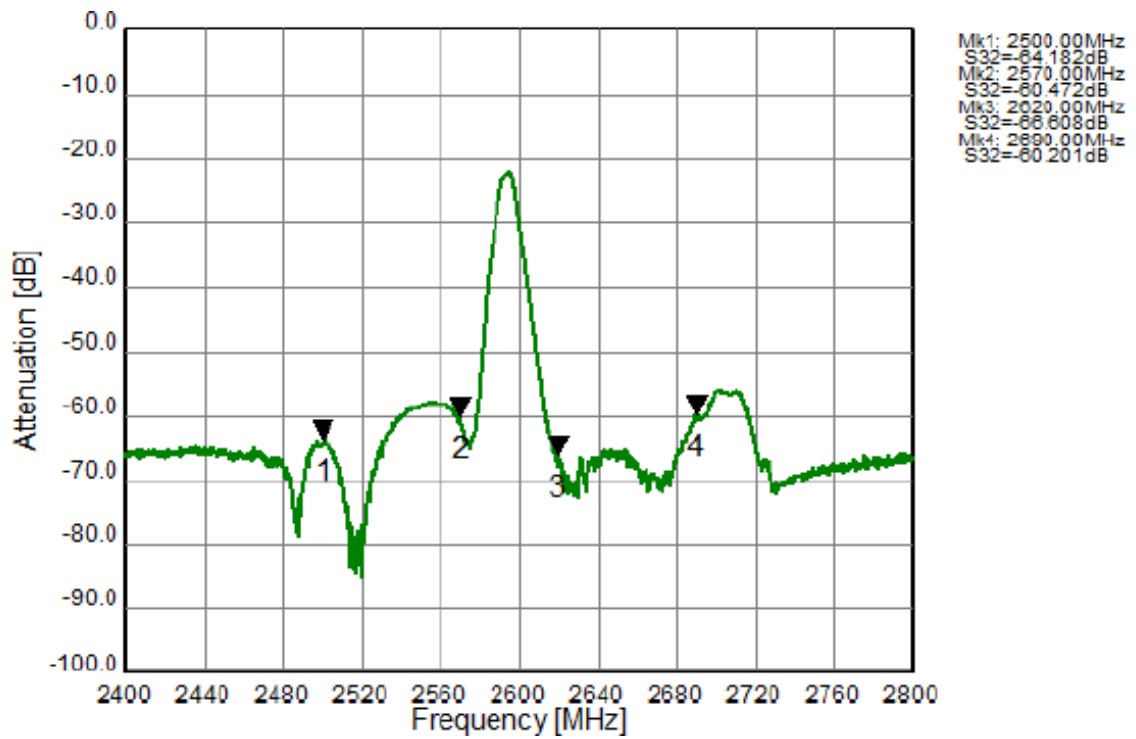
Ant to Rx



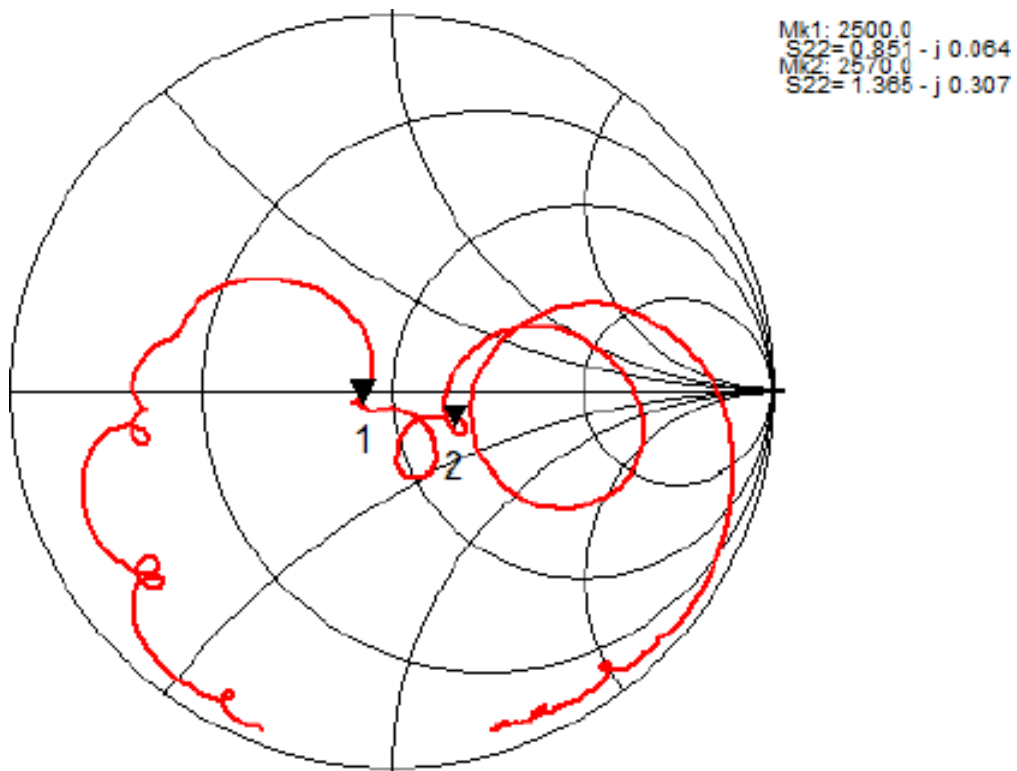
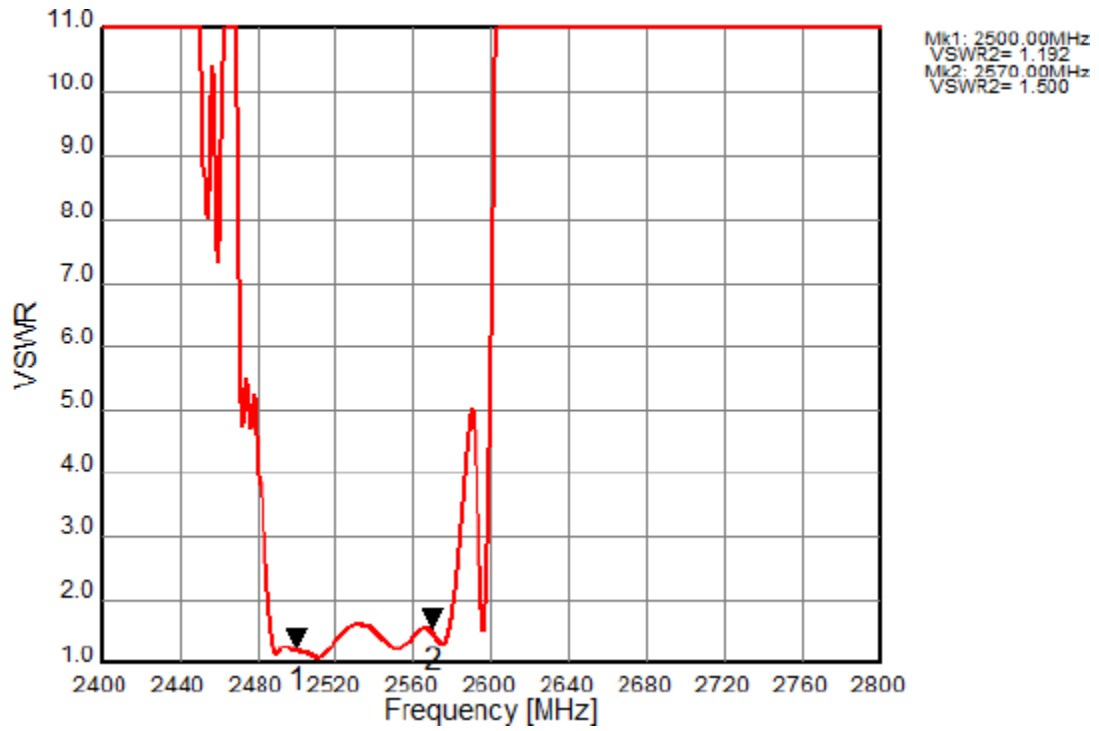
Tx to Ant ,Ant to Rx



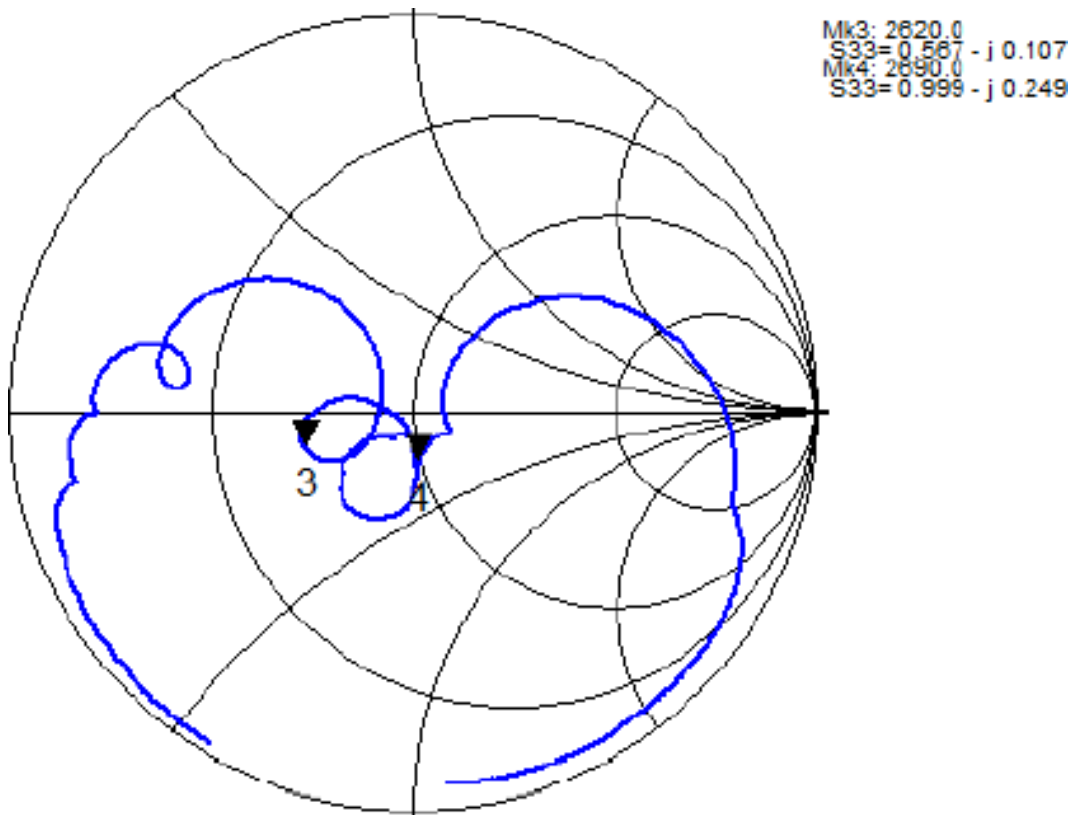
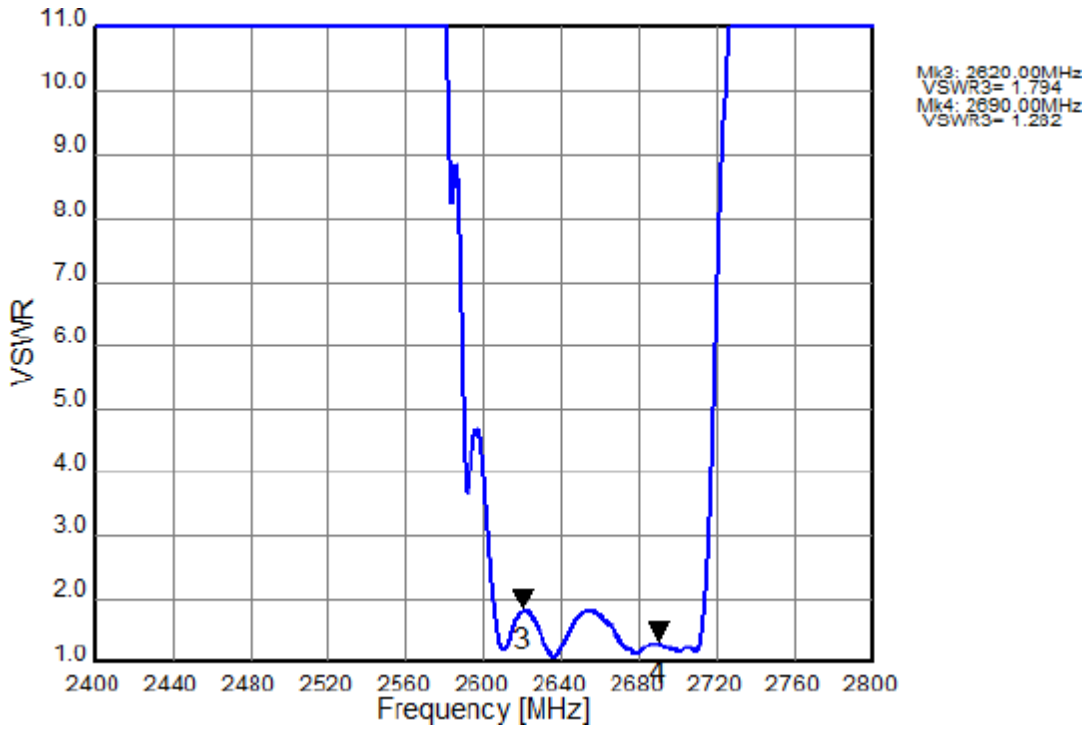
Tx to Rx Isolation



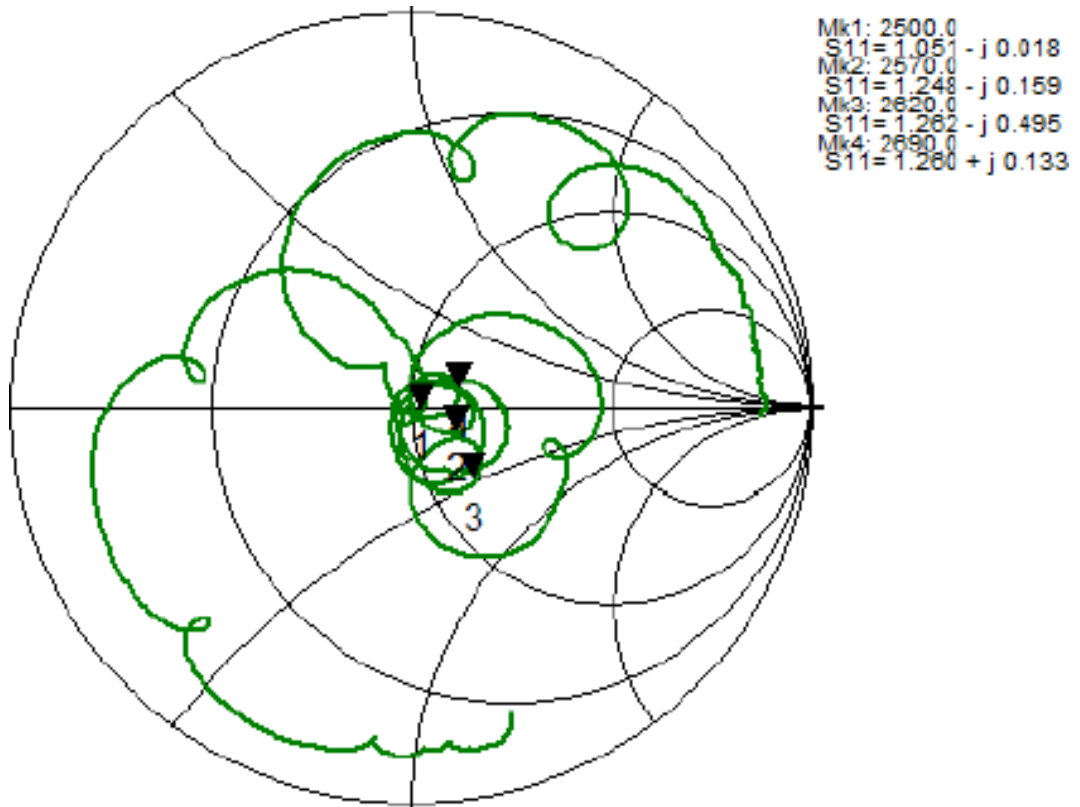
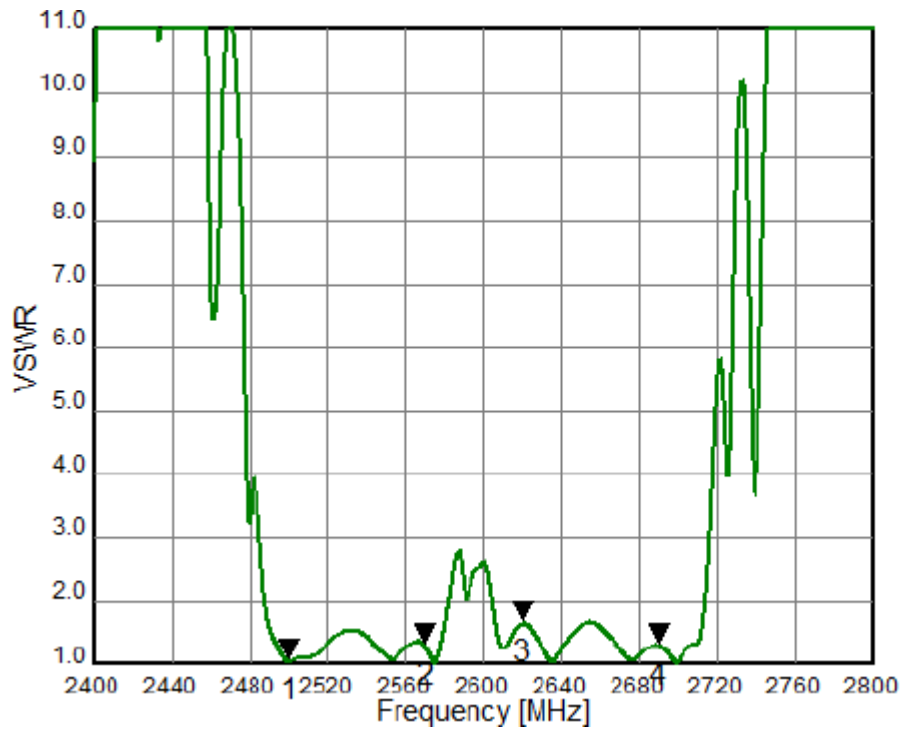
Tx Port



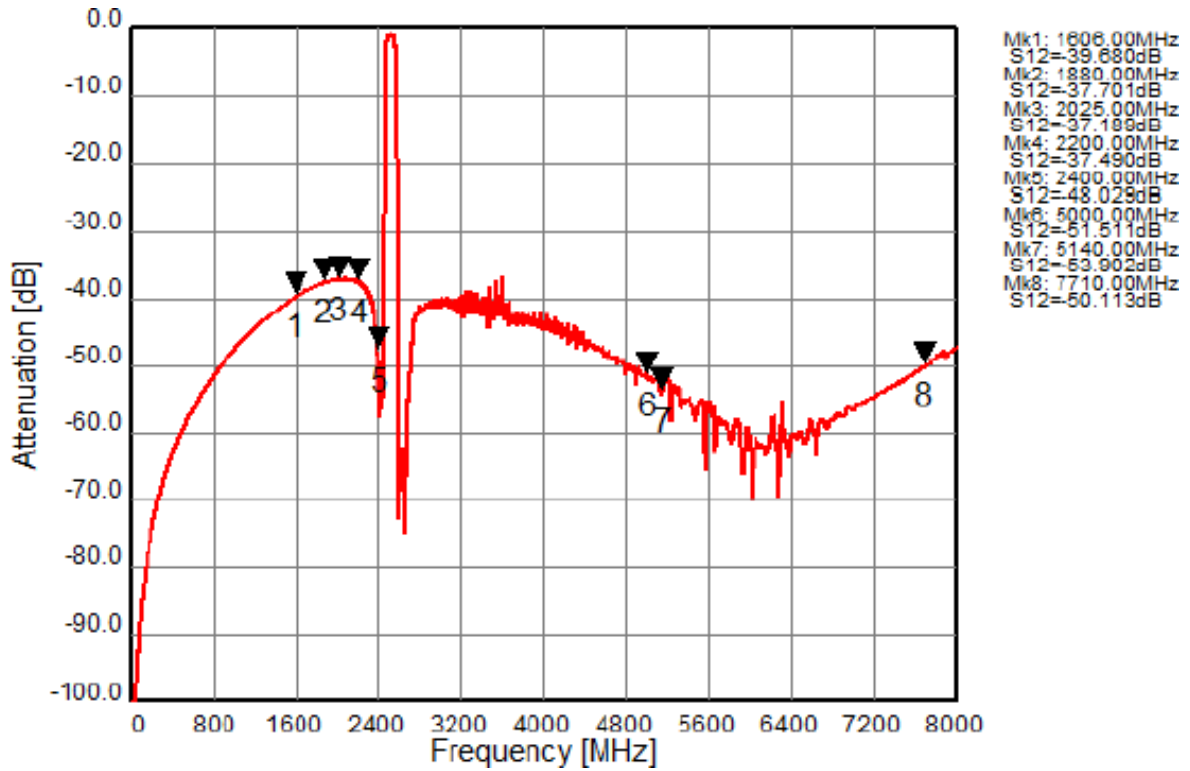
Rx Port



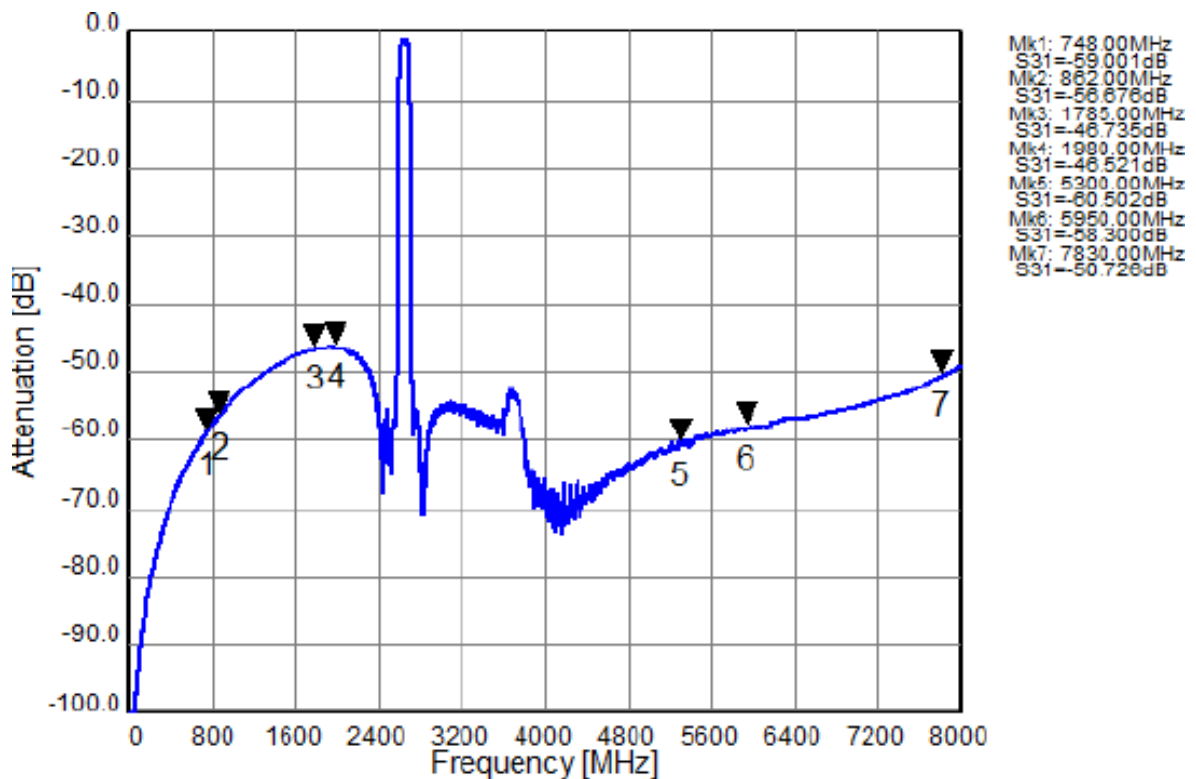
Ant Port



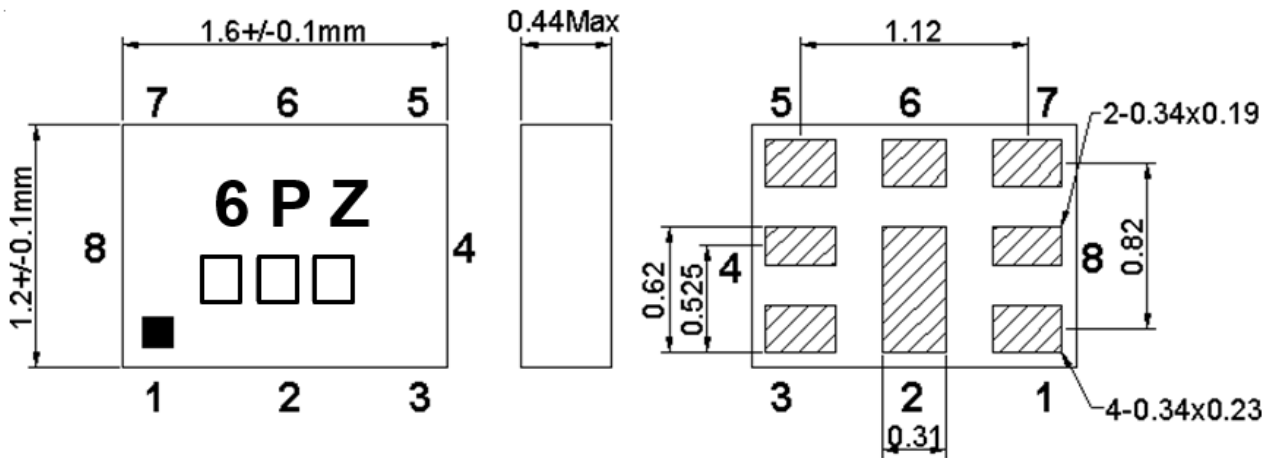
Tx to Ant (Wide span)



Ant to Rx (Wide span)



OUTLINE DRAWING:



Not Specified Tolerance : +/-0.05 mm
 Coplanarity : 0.1 mm max.
 1 to 8 : Pin No.
 Unit : mm

Marking name : **6PZ**

△ Date code(2020 May → s ,....., 2023 Dec→m.)

◇◇ Lot Code.

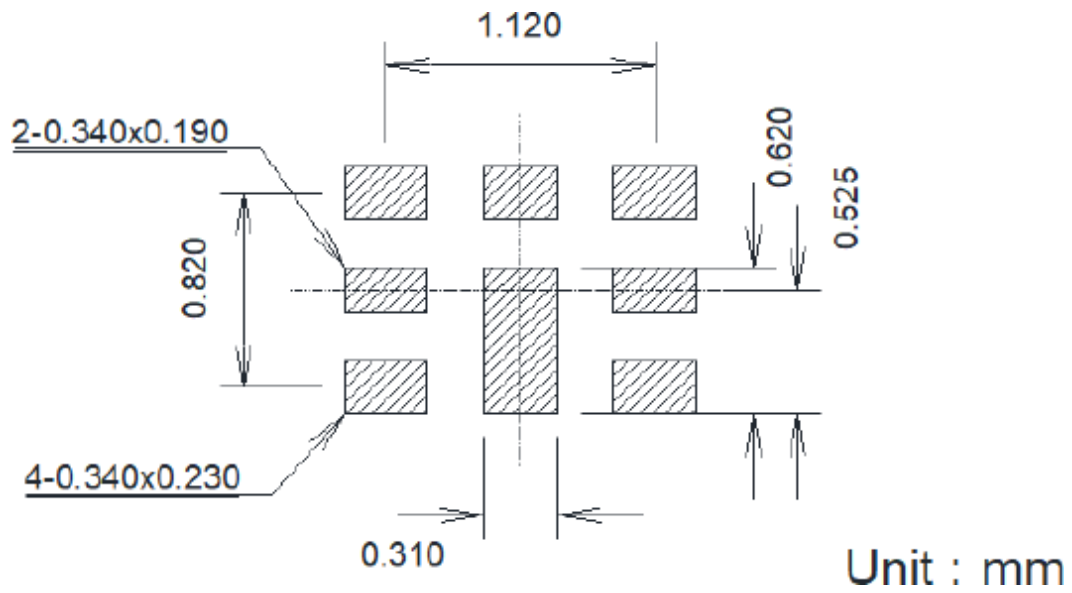
Product Date Code. Follow below table. (4-year cycle)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016 / 2020	n	p	q	r	s	t	u	v	w	x	y	z
2017 / 2021	A	B	C	D	E	F	G	H	J	K	L	M
2018 / 2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019 / 2023	a	b	c	d	e	f	g	h	j	k	l	m

Pin Configuration

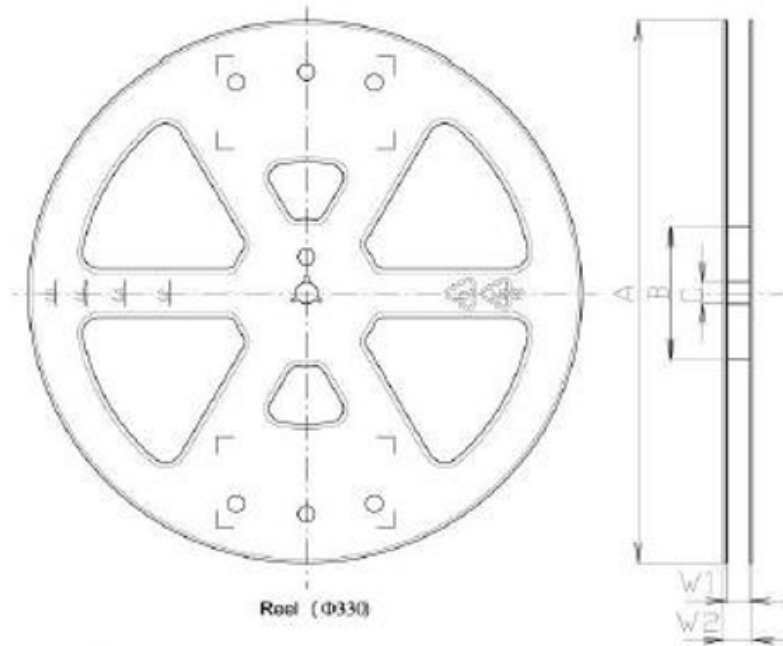
Pin No.	Symbol	Function
1	Rx	Receiver
2	GND	Ground
3	Tx	Transmitter
4	GND	Ground
5	GND	Ground
6	Ant	Antenna
7	GND	Ground
8	GND	Ground

FOOTPRINT:



PACKING:

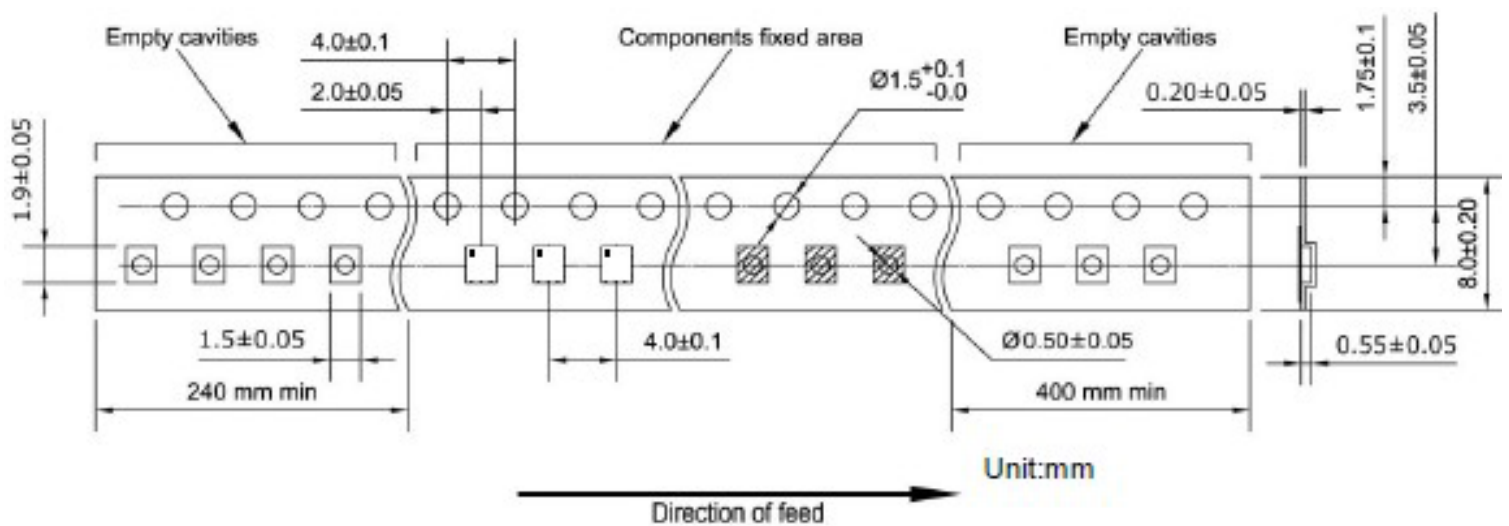
1. REEL DIMENSION



Order	Code	Quantity (pcs./reel)	A	B	C	W1	W2	Tape Pitch
Standard	Y	15,000	φ330	φ100	φ13 ±0.2	9.4 ±1.0	13.4 ±1.0	4.0 ±0.1
Option	Z	3,000	φ180	φ60	φ13 ±0.2	9 +1.0/-0.0	11.4 ±1.0	4.0 ±0.1

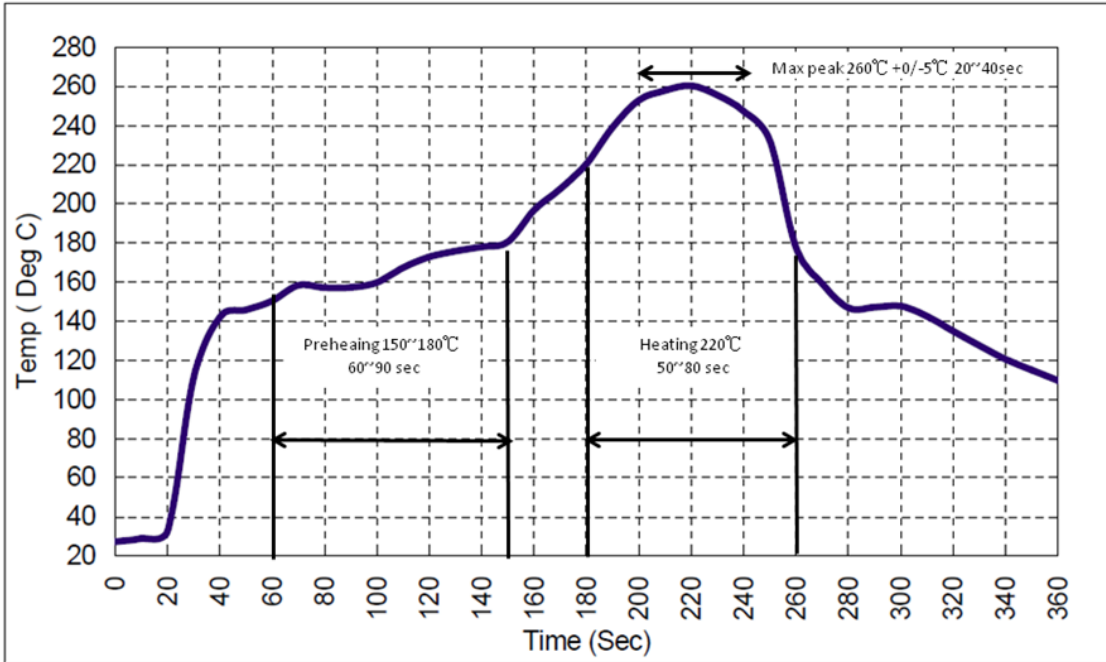
Unit:mm

2. TAPE DIMENSION



RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245~260°C peak (min. 10sec).
4. Time : 2 times.



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. This component was always RoHS compliant from the first date of manufacture.