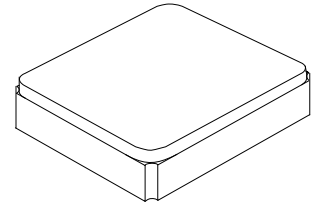


SF2765QM

**1643.5 / 1542 MHz
SAW Duplexer**



SM1612-8

Maximum Rating:

- Input Power Level: 31dBm (Ta=+50deg C, 5000h)
- DC Voltage : +/-5 V
- Operating Temperature: -40°C to +105°C
- Storage Temperature: -40°C to +105°C
- Moisture Sensitivity Level: Level 1 (**MSL 1**)
- ESD 50V(MM) 100V(HBM)
- AEC-Q200 Compliant
- **Band n255**

Electrical Characteristics:

Tx to Ant

Item		Unit	Min	Typ	Max	Remarks
Center frequency		MHz		1643.5		
Insertion Loss		1626.5 - 1660.5 MHz	dB	1.5	2.0	
Amplitude Ripple		1626.5 - 1660.5 MHz	dB	0.8	1.6	
VSWR	Tx Ant	1626.5 - 1660.5 MHz		1.3	2.0	
				1.4	2.0	
Attenuation	617 - 960 MHz		dB	45	54	
	1525 - 1559 MHz		dB	52	57	
	1559 - 1605 MHz		dB	45	50	
	1574 - 1577 MHz		dB	45	50	
	1598 - 1606 MHz		dB	40	50	
	1606 - 1610 MHz		dB	32	48	
	1700 - 2200 MHz		dB	45	51	
	2300 - 2690 MHz		dB	49	55	
	3253 - 3321 MHz		dB	42	48	
	3300 - 4200 MHz		dB	42	48	
	4400 - 5000 MHz		dB	42	50	
	4879.5 - 4981.5 MHz		dB	42	50	
6506 - 6642 MHz		dB	35	47		

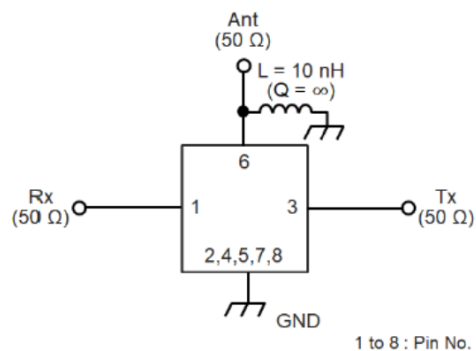
Ant to Rx

Item		Unit	Min	Typ	Max	Remarks
Center frequency		MHz		1542		
Insertion Loss		1525 - 1559 MHz	dB	1.0	1.5	
Amplitude Ripple		1525 - 1559 MHz		0.45	1.0	
VSWR	Rx	1525 - 1559 MHz		1.3	2.0	
	Ant			1.4	2.0	
Attenuation		50.75 MHz	dB	60	90	
		101.5 MHz	dB	60	80	
		617 - 960 MHz	dB	40	44	
		1626.5 - 1660.5 MHz	dB	58	64	
		1700 - 2200 MHz	dB	38	44	
		1730.5 - 1759.5 MHz	dB	42	47	
		2300 - 2690 MHz	dB	42	49	
		2401.5 - 2484 MHz	dB	42	50	
		3156.5 - 3185.5 MHz	dB	40	57	
		3300 - 4200 MHz	dB	34	45	
		4400 - 5000 MHz	dB	25	33	
		4785.5 - 4814.5 MHz	dB	28	36	
		5150 - 7125 MHz	dB	10	19	

Tx to Rx	Item	Unit	Min	Typ	Max	Remarks
Isolation	1525 - 1559 MHz	dB	54	57		
	1626.5 - 1660.5 MHz	dB	58	63		
Terminating Impedance	Tx port	Ω	50			
	Rx port	Ω	50			
	Ant port	Ω	50//10nH			
DC Impedance to Ground		M Ω	100			Device only

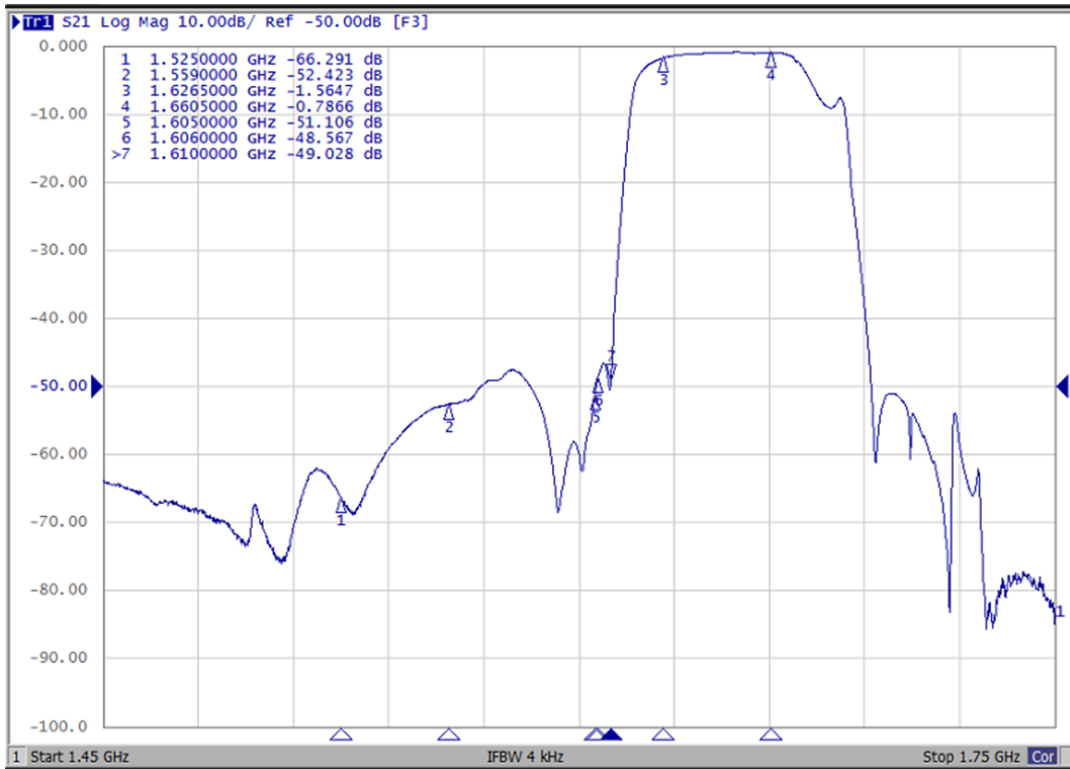
Schematic

*Typical Value @ 25°C +/-2

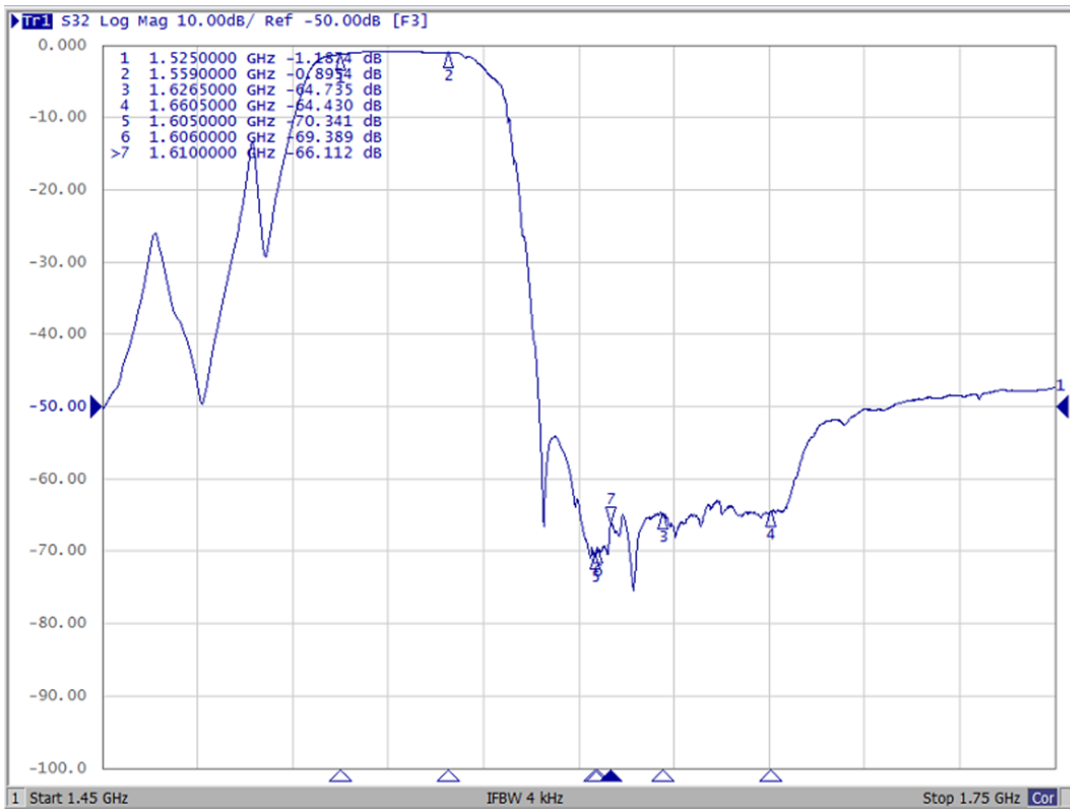


Performance Plots

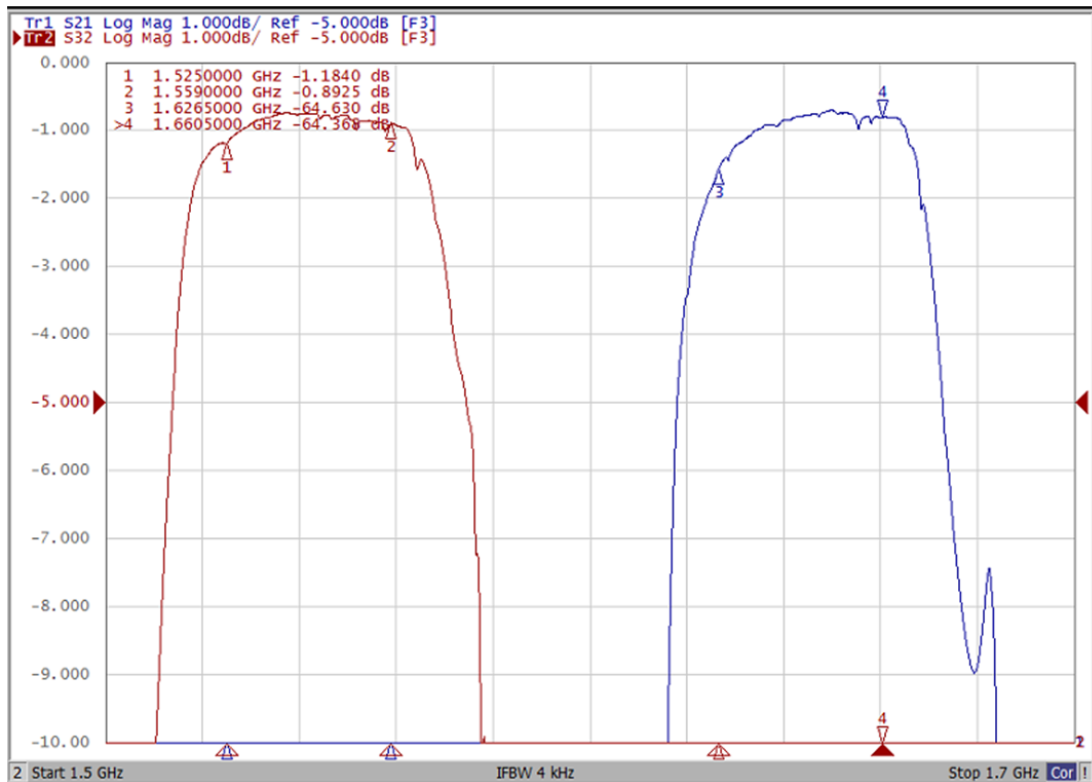
Tx to Ant



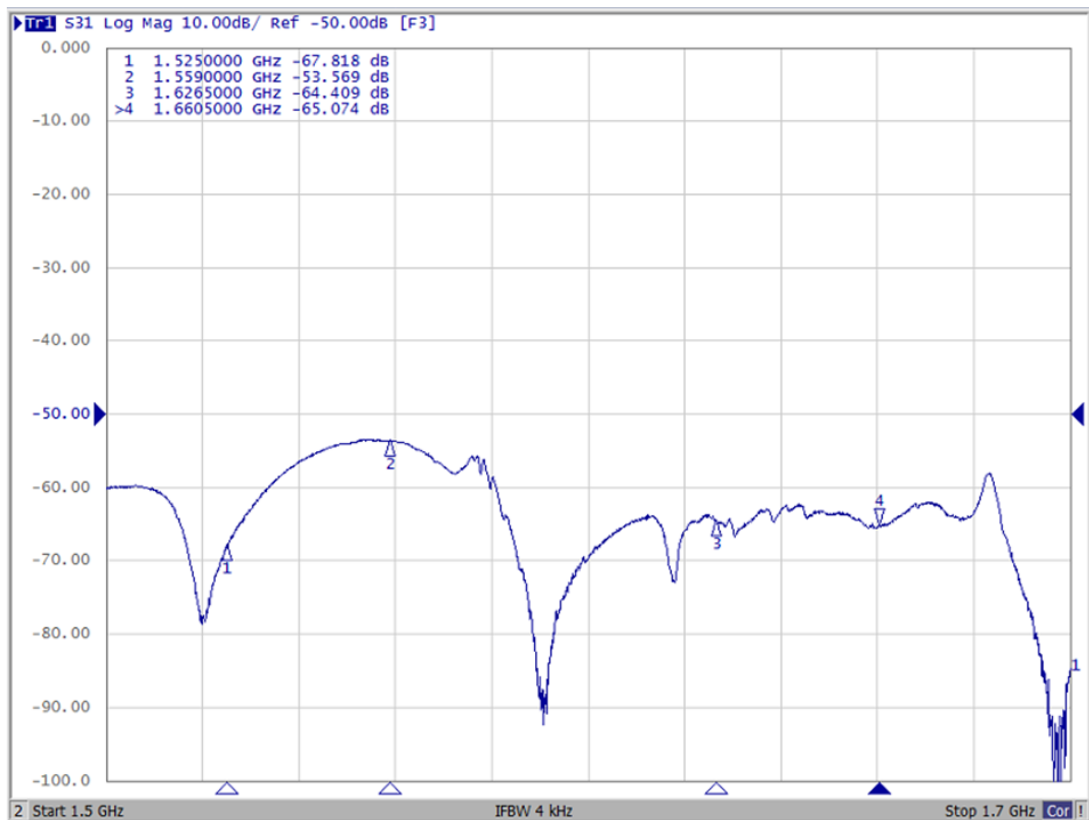
Ant to Rx



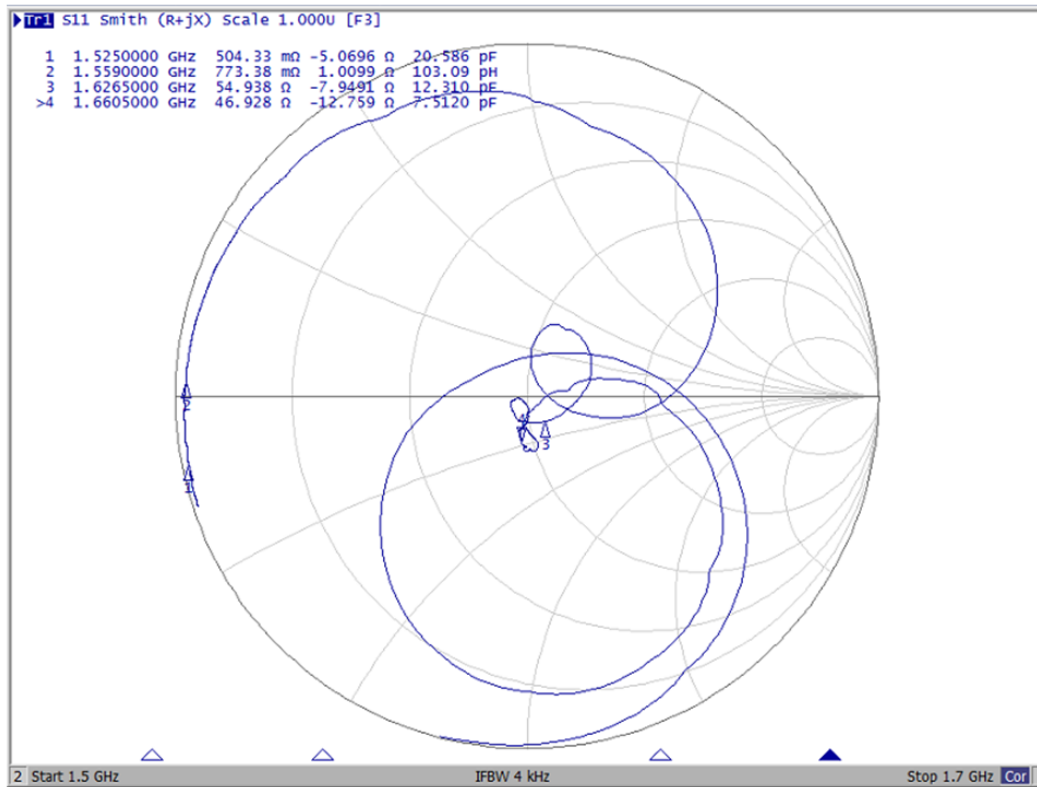
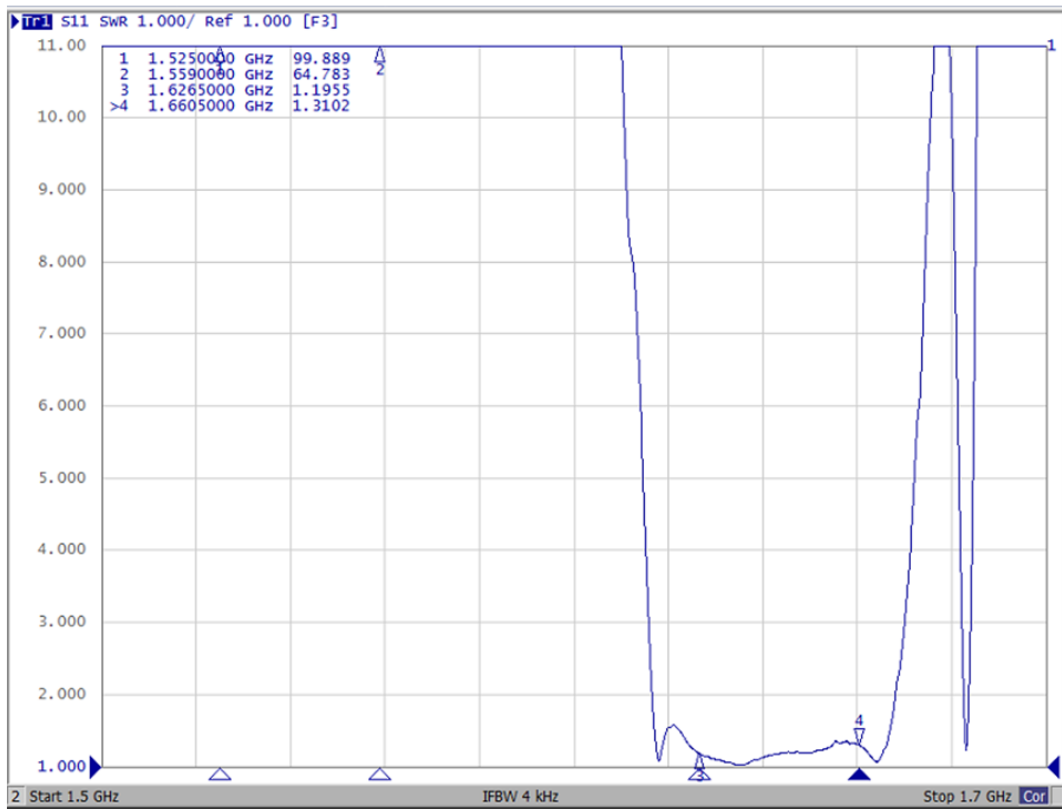
Tx to Ant, Ant to Rx



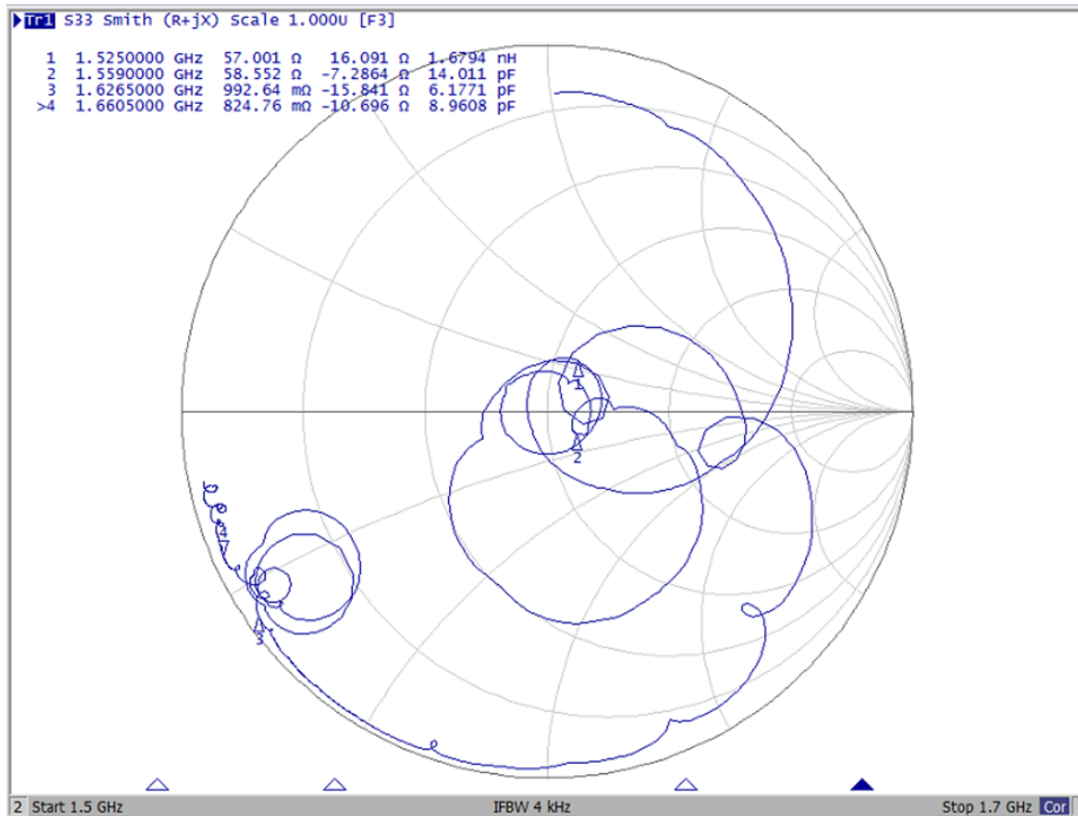
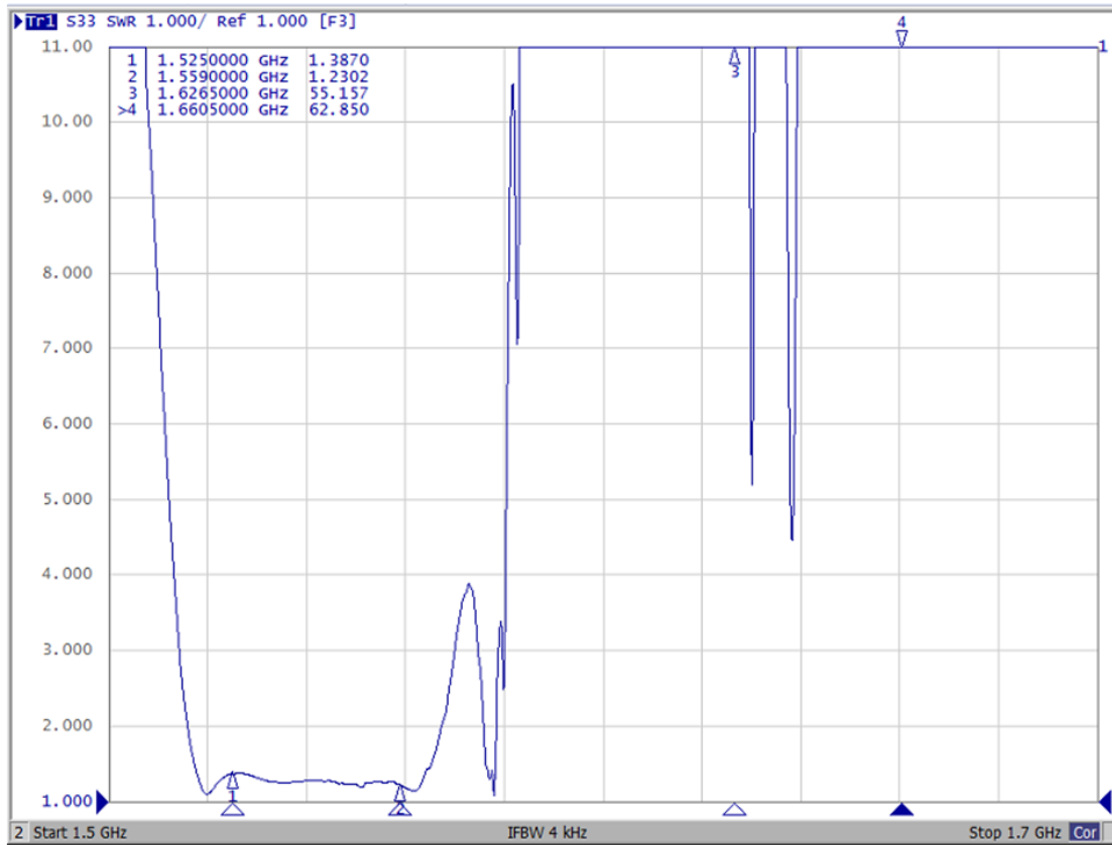
Tx to Rx Isolation



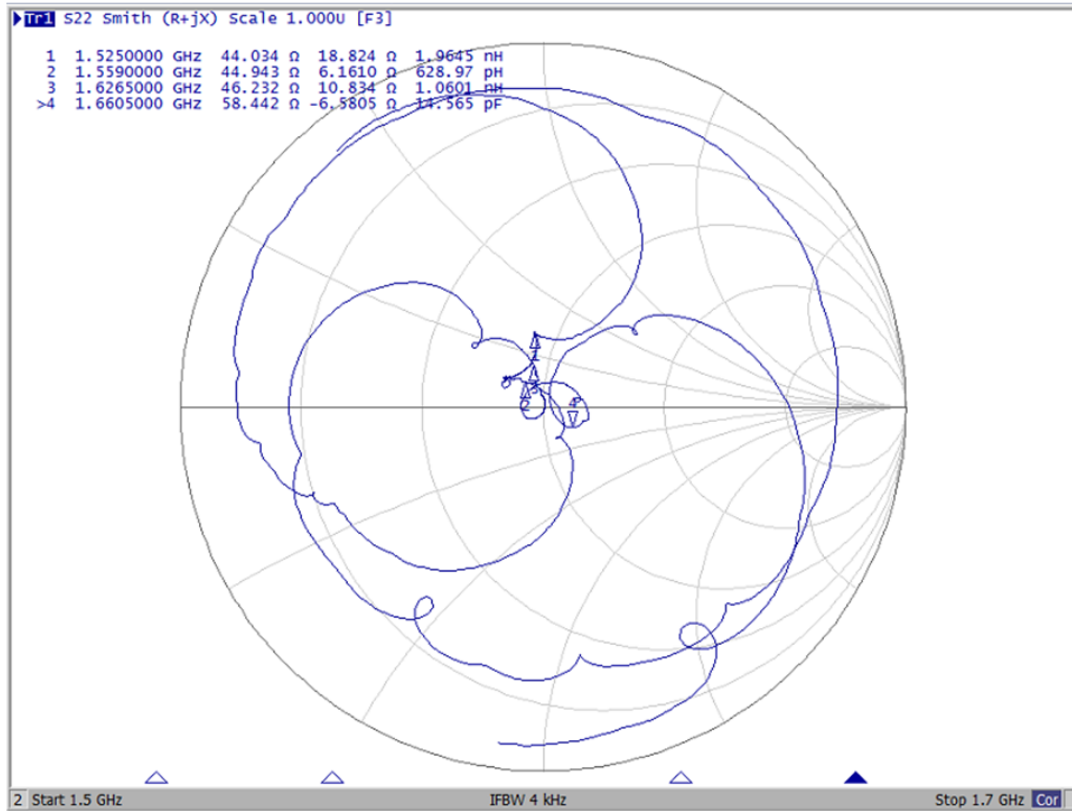
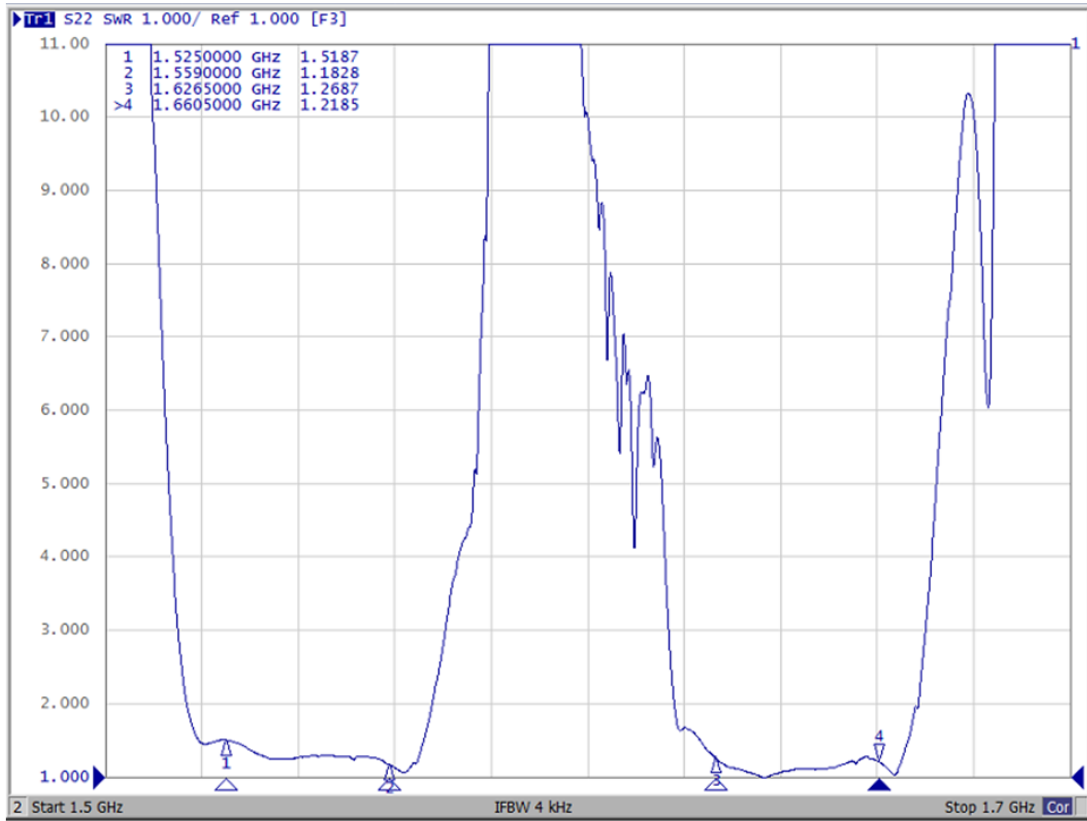
Tx Port



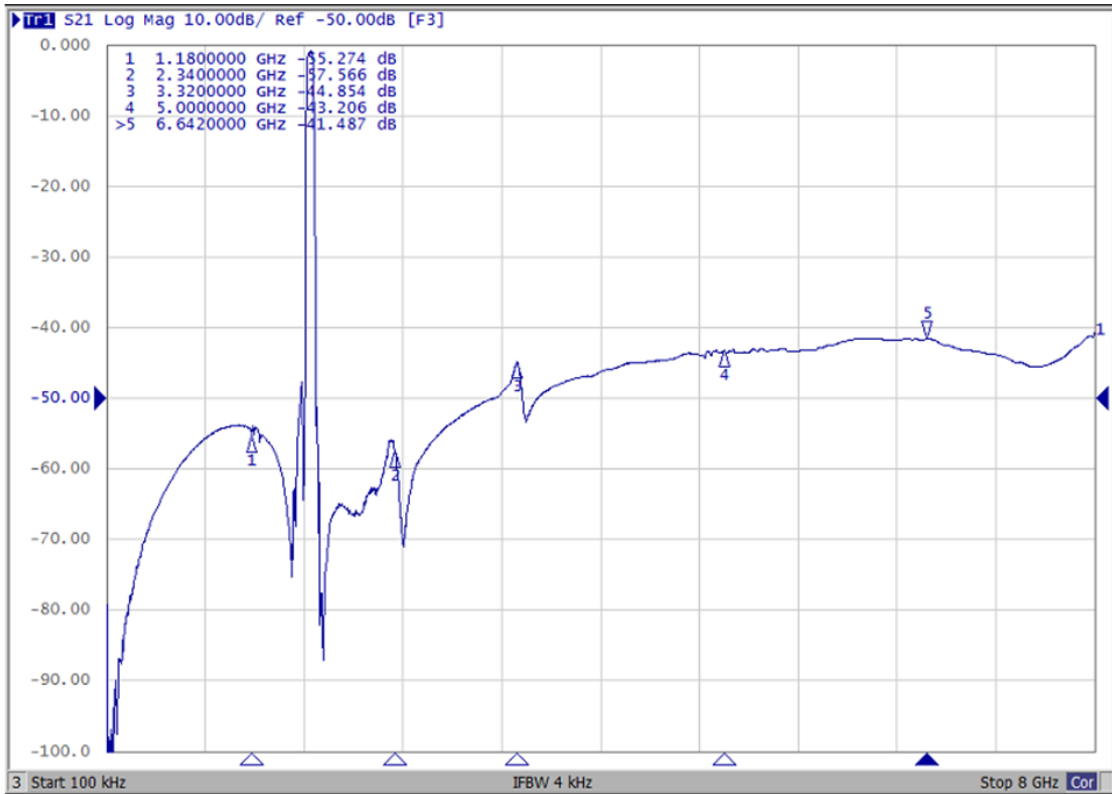
Rx Port



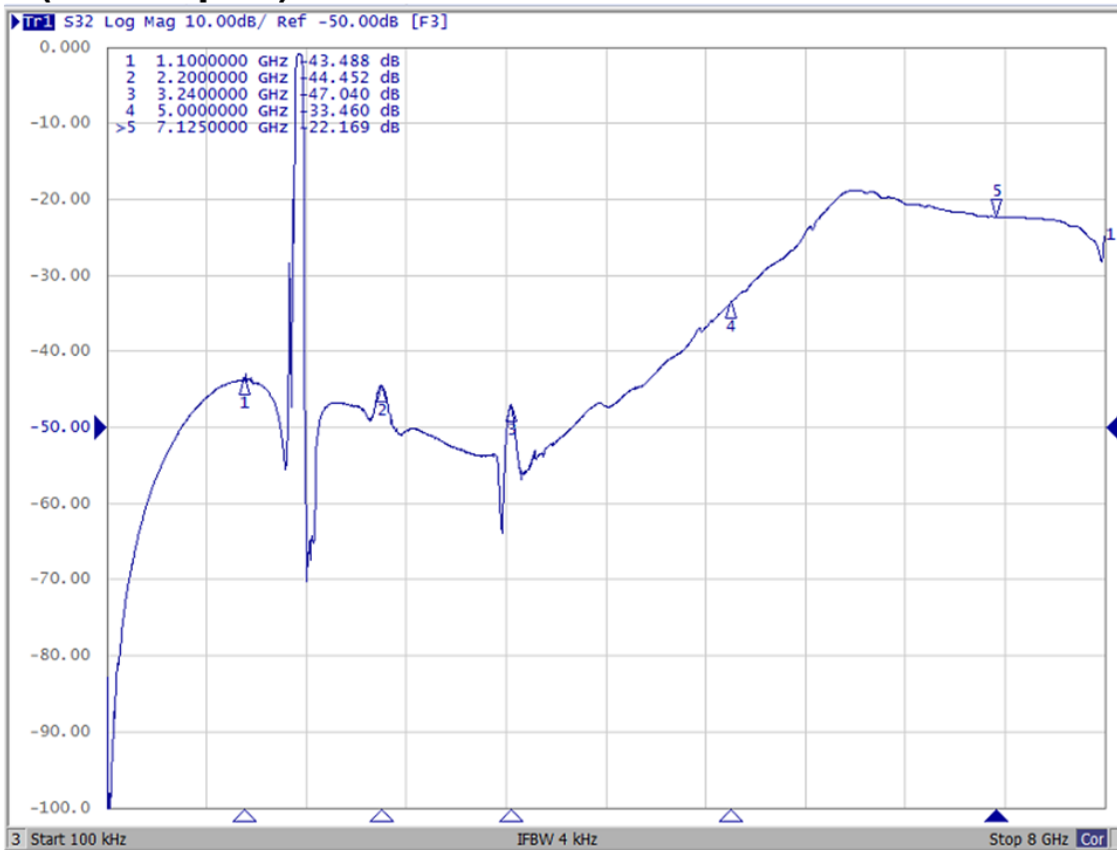
Ant Port



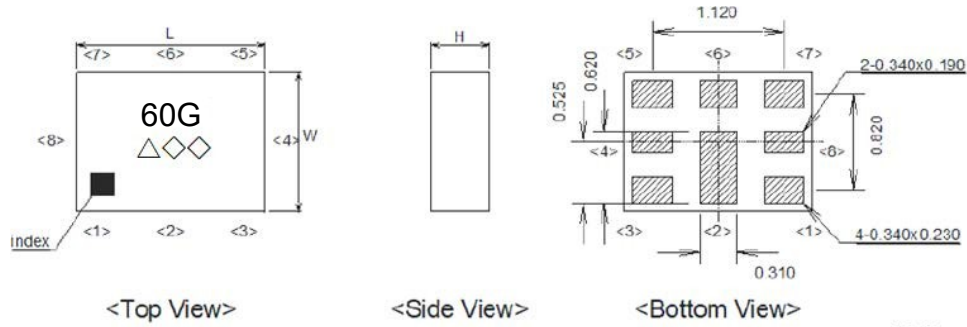
Tx to Ant (Wide Span)



Ant to Rx (Wide Span)



Package Drawing and Pin Description



Unit : mm
1 to 8 : Pin No.

Marking name:60G(Part Symbol)

△: Trace Code.(2020 May → s,....., 2023 Dec → m)

◇◇: Lot Code.

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

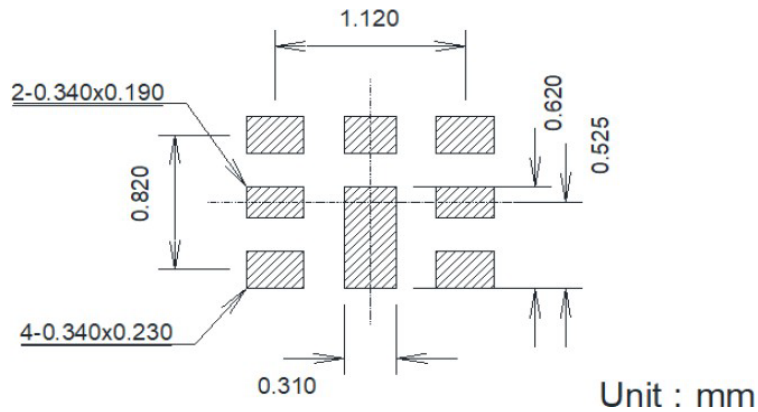
L = 1.6 +/- 0.1 mm

W = 1.2 +/- 0.1 mm

H = 0.44 mm Max

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

PCB Mounting Pattern



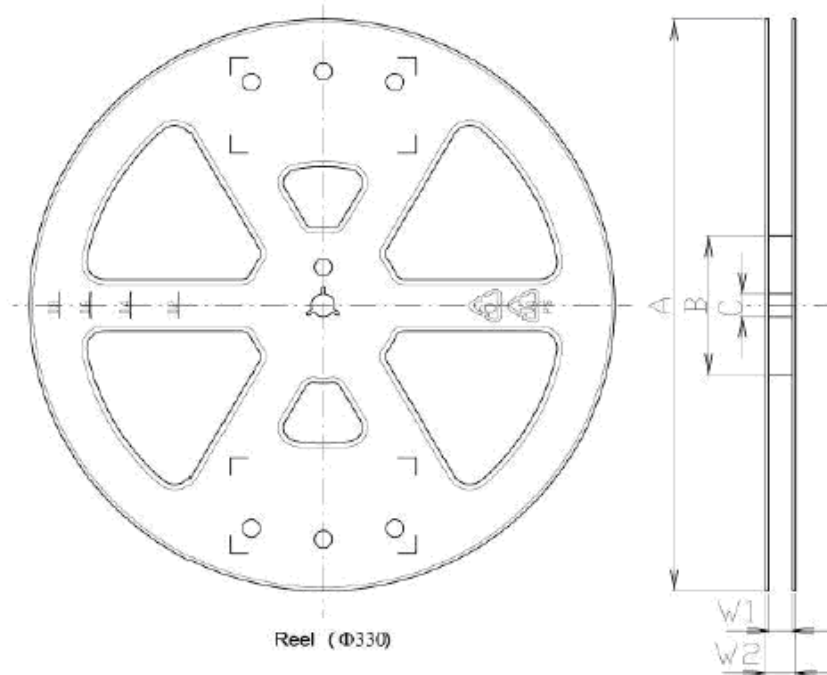
Unit : mm

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

Notes:

- All units are in mm unless otherwise stated
- General Tolerance
 - Linear: X.XXX = ±0.050mm
 - X.XX = ±0.10mm
- Terminations
 - Au: 0.10 um min.
 - Pd: 0.10 um min.
 - Ni: 2-5 um
- Pin 1 indicated by 0.100 mm Chamfer

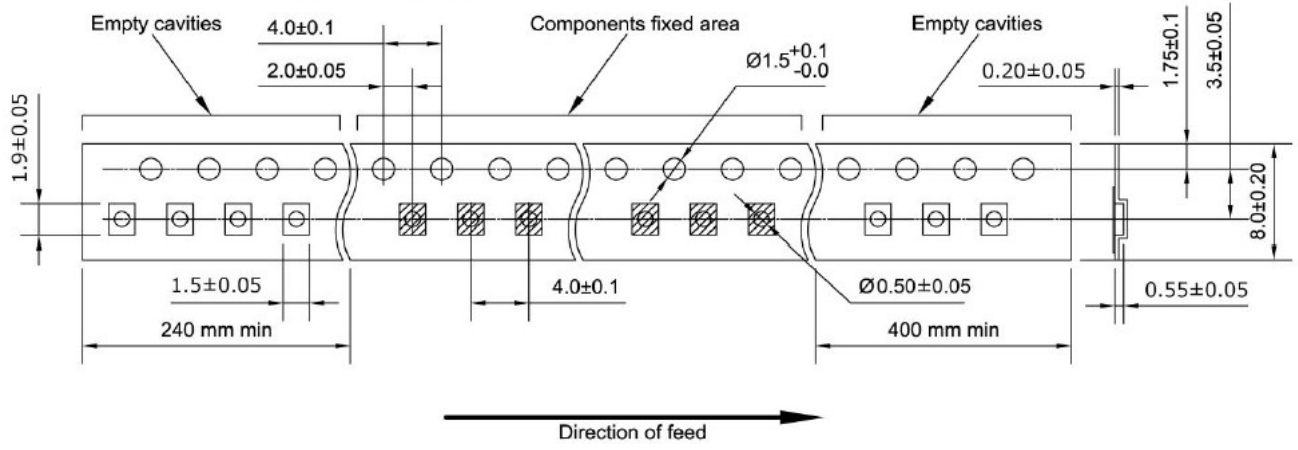
Reel Dimension



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

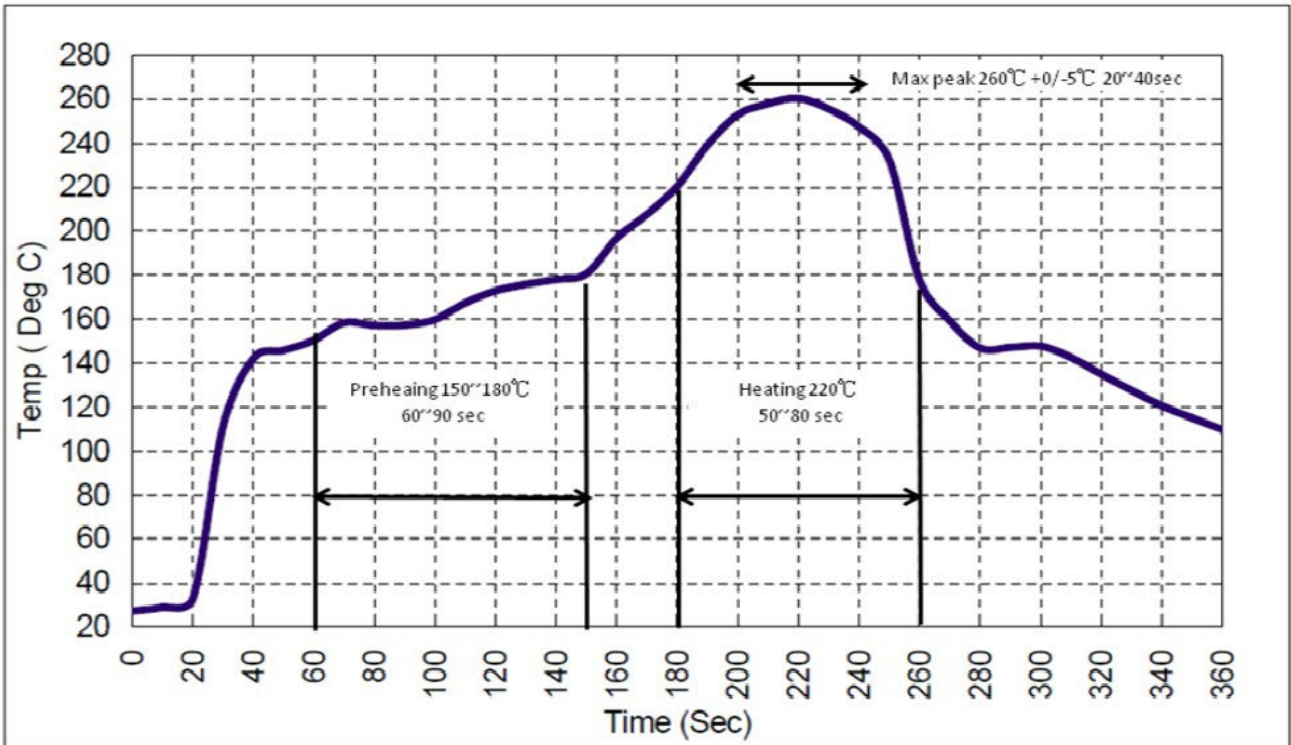
Unit:mm

Dimensions of Tape (Standard)



Recommended Solder 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 260°C +0/-5°C peak (20~40sec).
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.