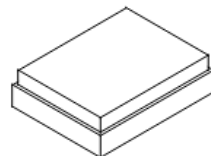


MAXIMUM RATING:

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

**710/740 MHz
Filter Duplexer**



SM1814

ELECTRICAL CHARACTERISTICS:

Terminating impedance(Tx Port): 50 Ω (Single-ended)

Terminating impedance(Rx Port): 50 Ω (Single-ended)

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

Tx to ANT

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss(*1)	704~ 716 MHz	dB	-	1.25	1.85	
Ripple	704~ 716 MHz	dB	-	0.4	1.0	
VSWR	Tx	-	-	1.7	2.0	
	ANT	-	-	1.5	2.0	
Attenuation:						
734 ~ 746 MHz		dB	50	58	-	-
746 ~ 768 MHz		dB	30	45	-	-
768 ~ 805 MHz		dB	25	36	-	-
869 ~ 894 MHz		dB	30	35	-	
1408 ~ 1432 MHz		dB	30	40	-	
1559 ~ 1606 MHz		dB	35	43		
2110 ~ 2155 MHz		dB	30	40		
2400 ~ 2484 MHz		dB	25	36		
2816 ~ 2864 MHz		dB	15	33		
4900 ~ 5850 MHz		dB	5	11		

ANT to Rx

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss(*1)	734 ~ 746 MHz	dB	-	1.65	2.35	
Ripple	734 ~ 746 MHz	dB	-	0.4	1.2	
VSWR	ANT	-	-	1.5	2.0	
	Rx	-	-	1.5	2.0	
Attenuation:						
704 ~ 716 MHz		dB	55	64	-	
776 ~ 805 MHz		dB	35	41	-	
814 ~ 960 MHz		dB	40	57		
1710 ~ 1755 MHz		dB	40	54		
1850 ~ 1920 MHz		dB	40	53		
2202 ~ 2238 MHz		dB	40	51		
2400 ~ 2500 MHz		dB	40	50		
4900 ~ 5950 MHz		dB	40	50		

Tx to Rx

Isolation	704 ~ 716 MHz	dB	60	65	-	
	734 ~ 746 MHz	dB	55	60	-	

(*1) Specification of insertion loss excludes loss that comes from the test board.



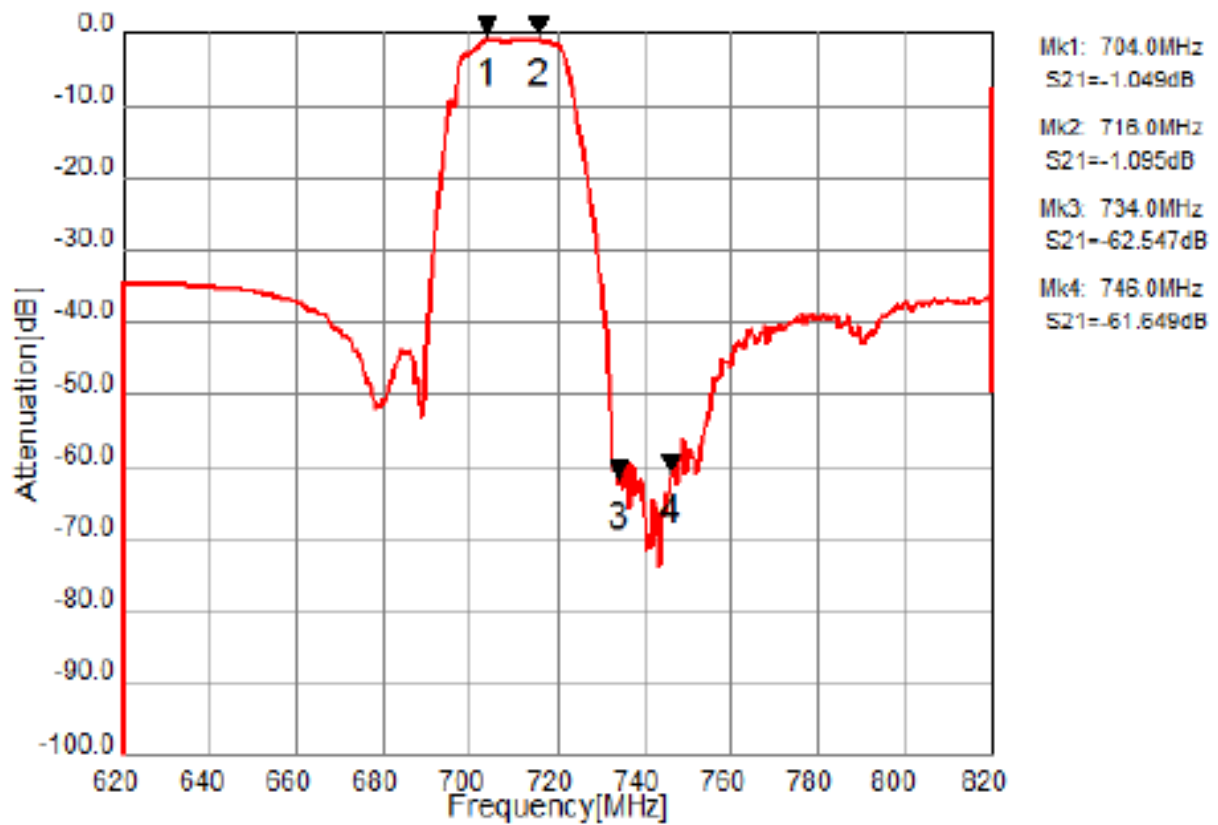
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

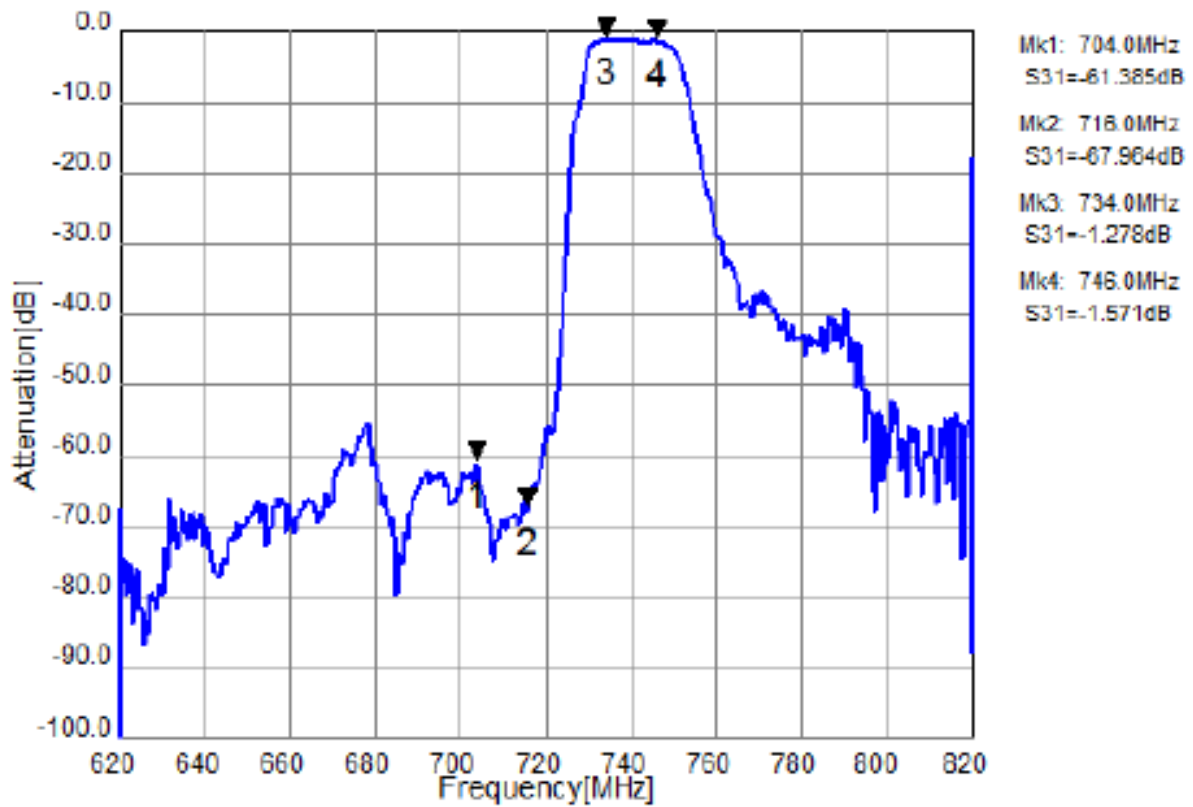
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics:

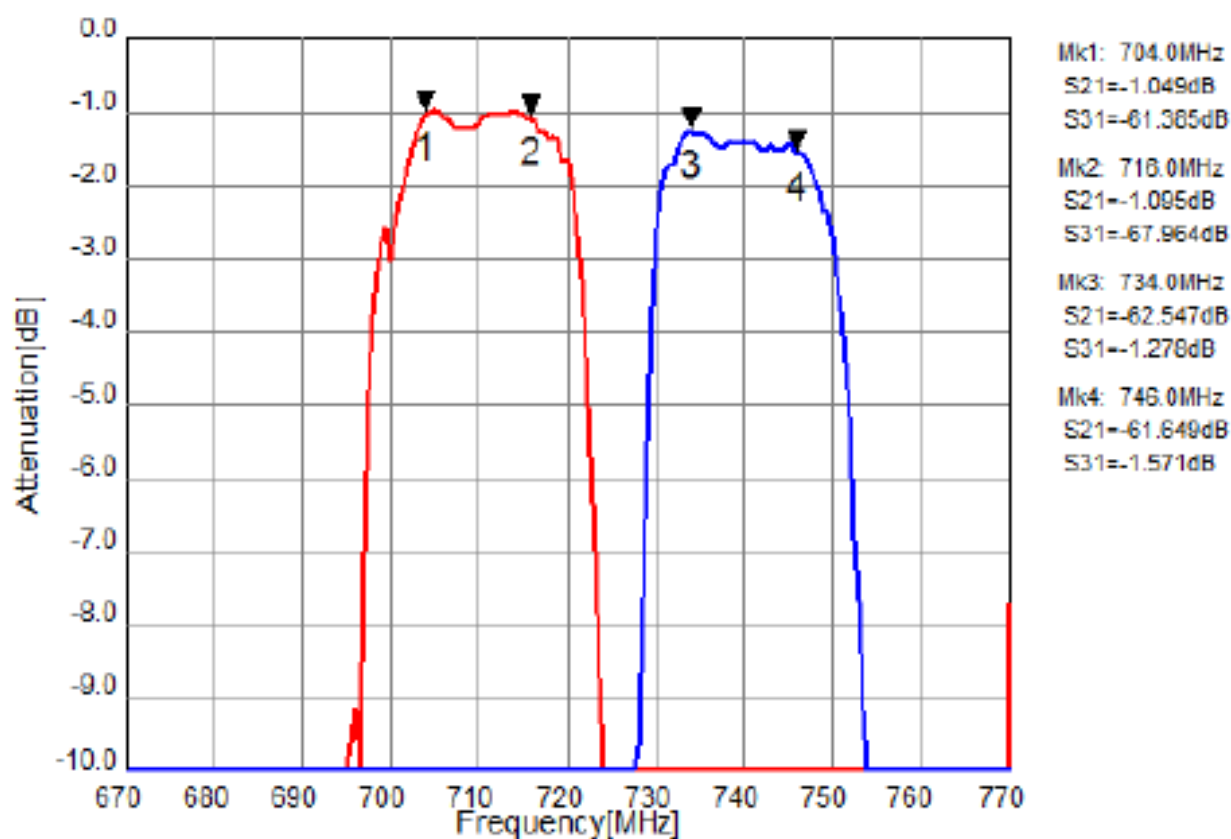
Tx to Ant



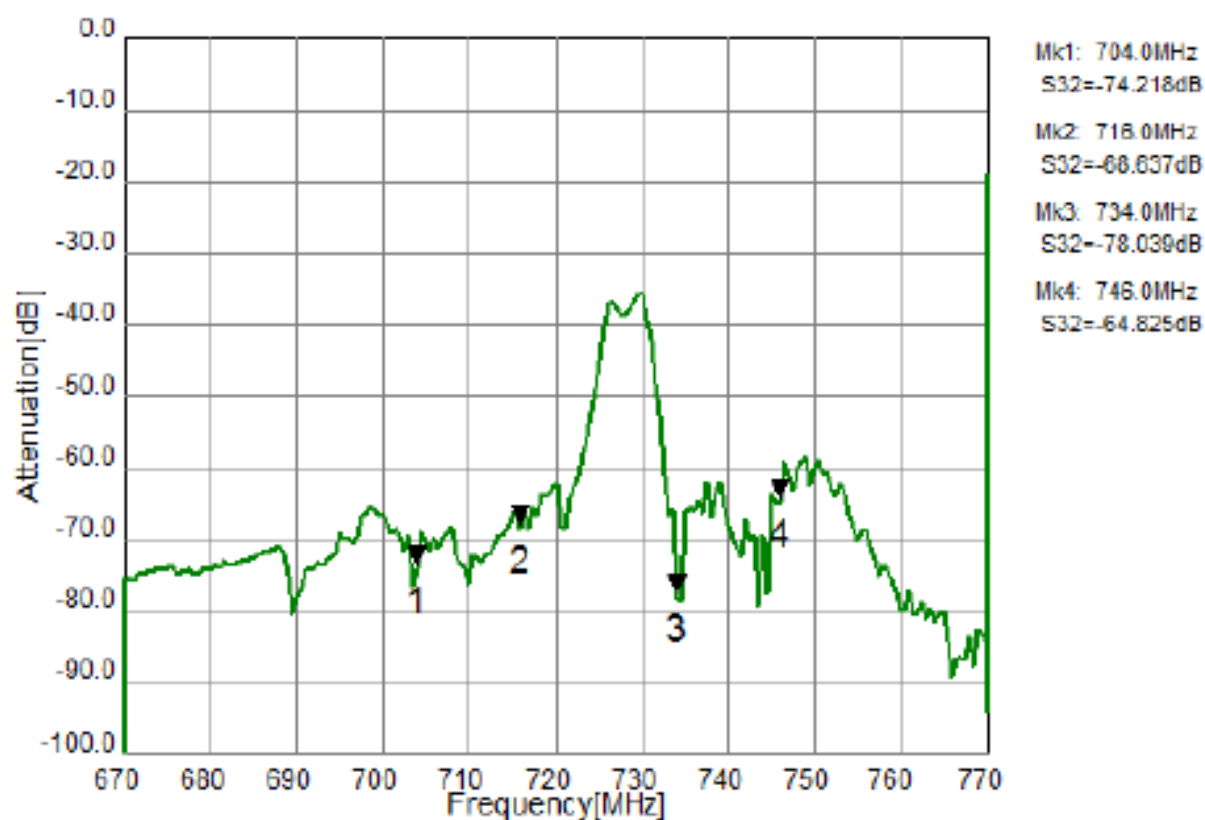
Ant to Rx



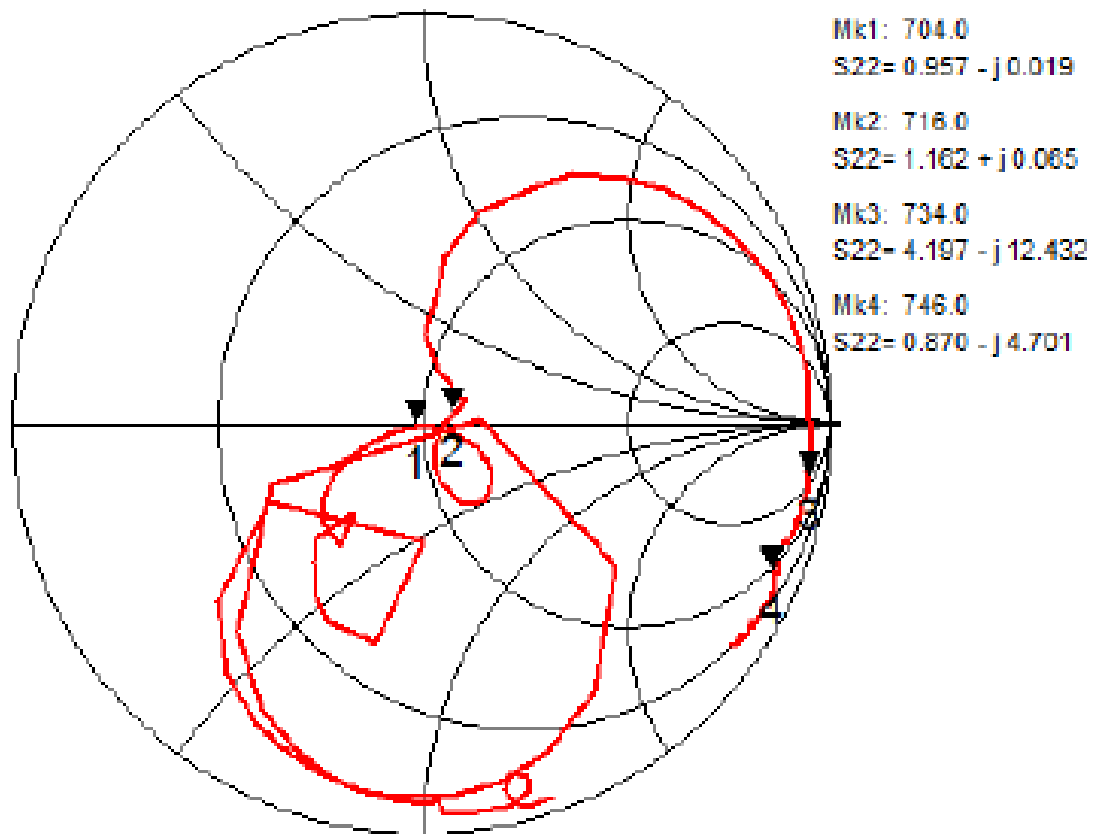
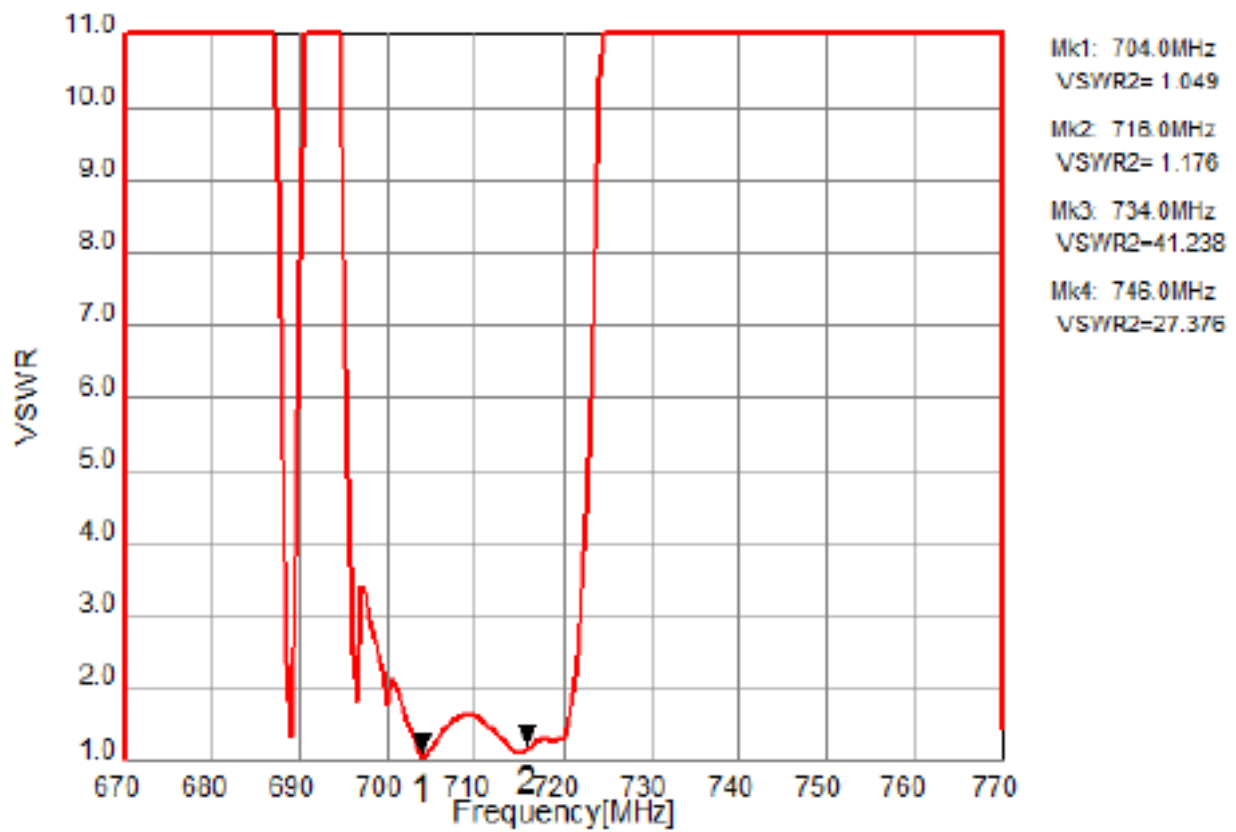
Tx to Ant, Ant to Rx



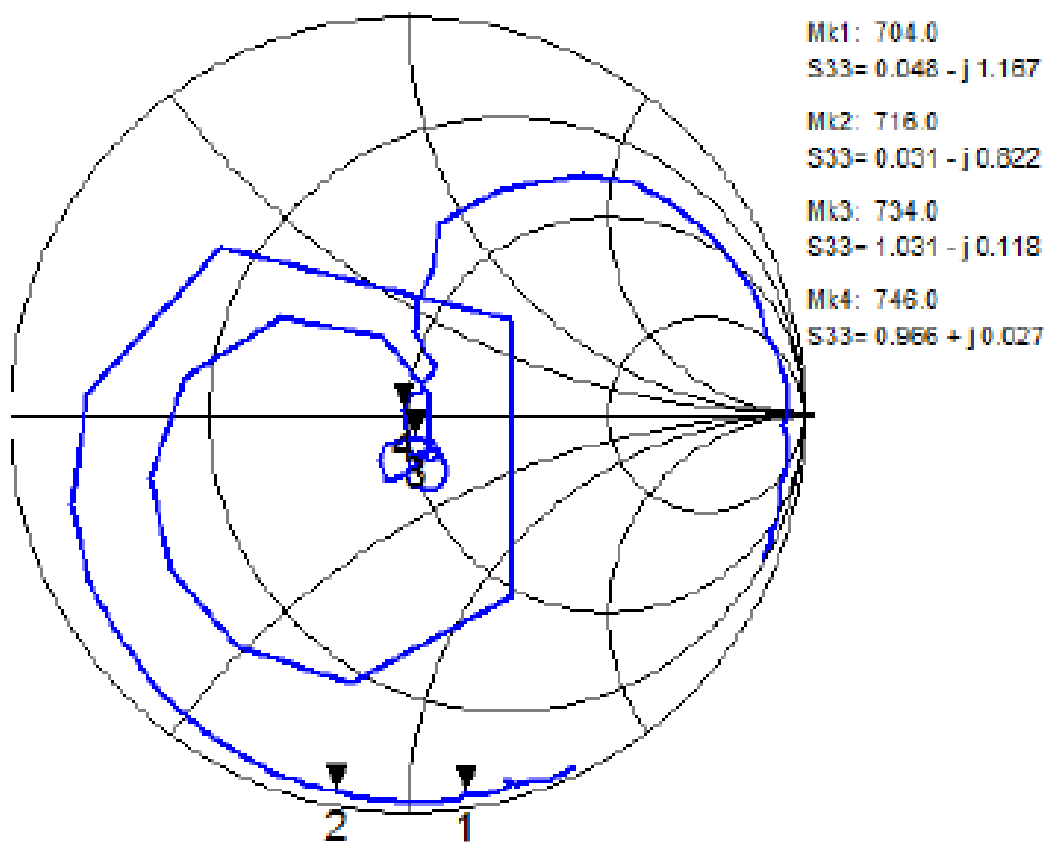
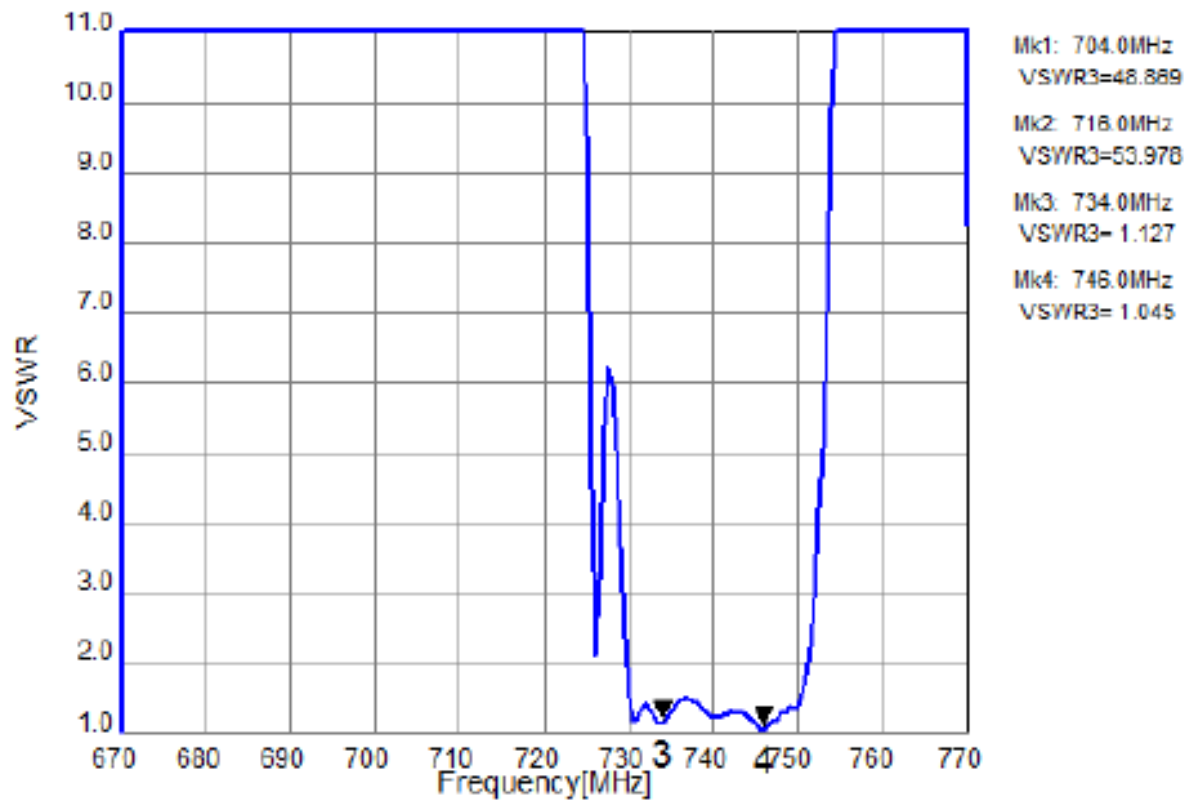
Tx to Rx Isolation



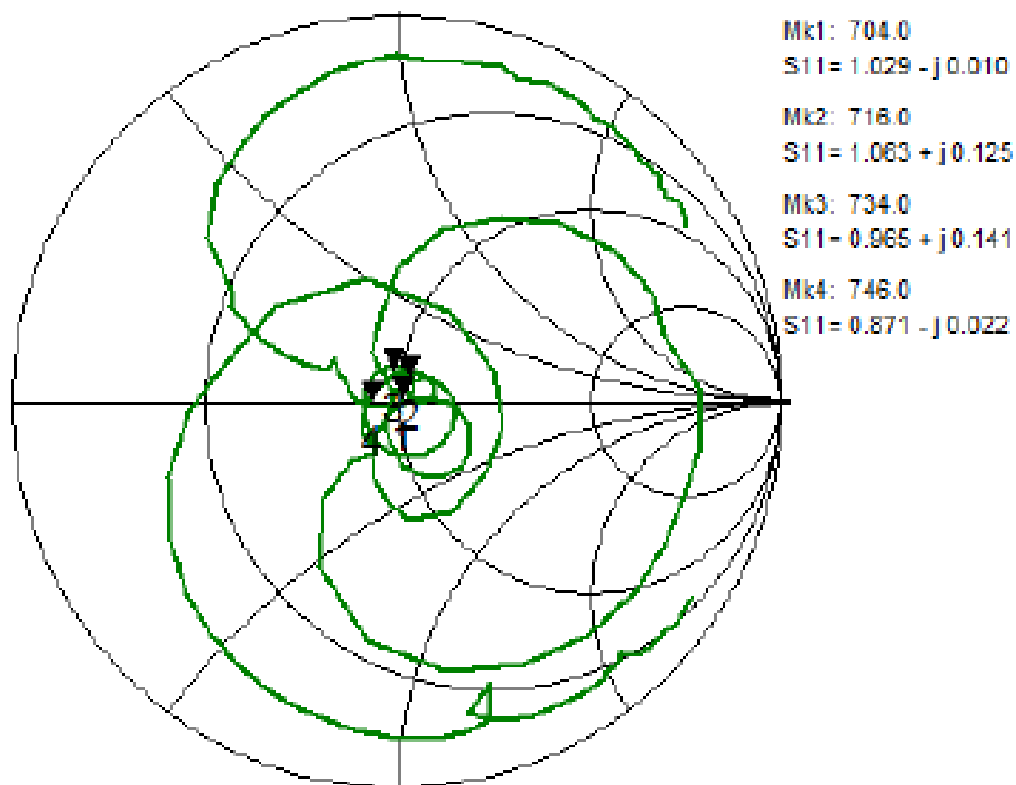
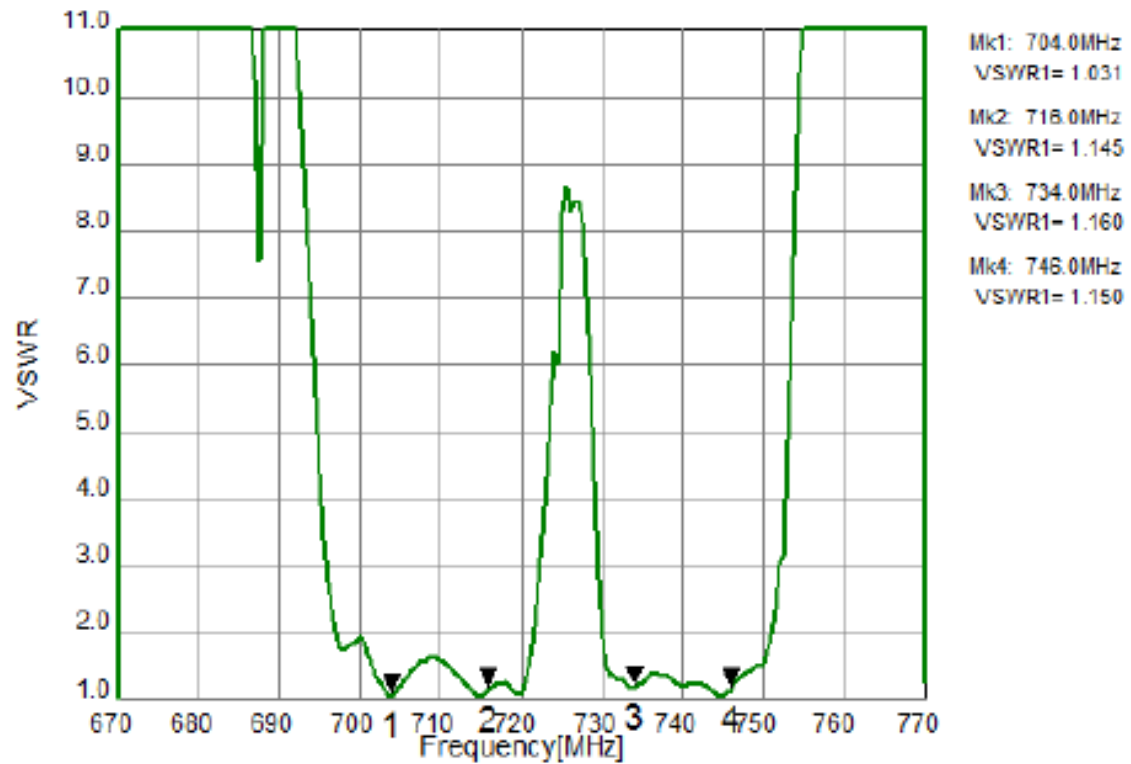
Tx Port



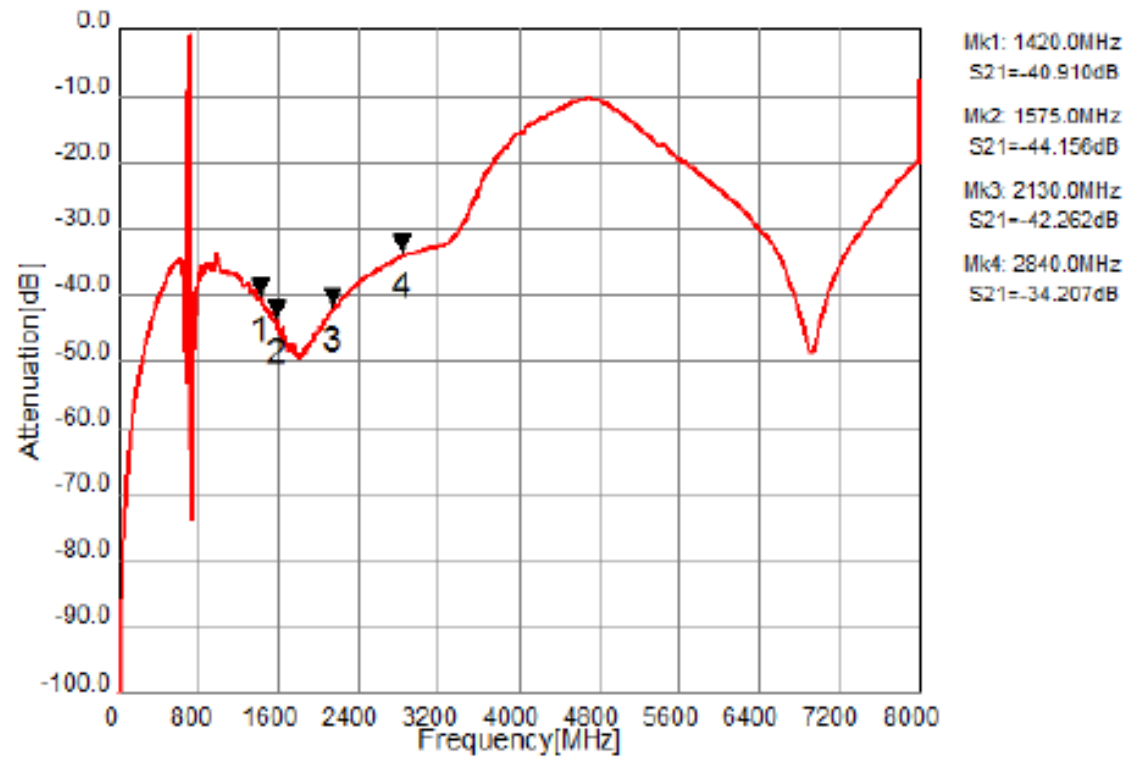
Rx Port



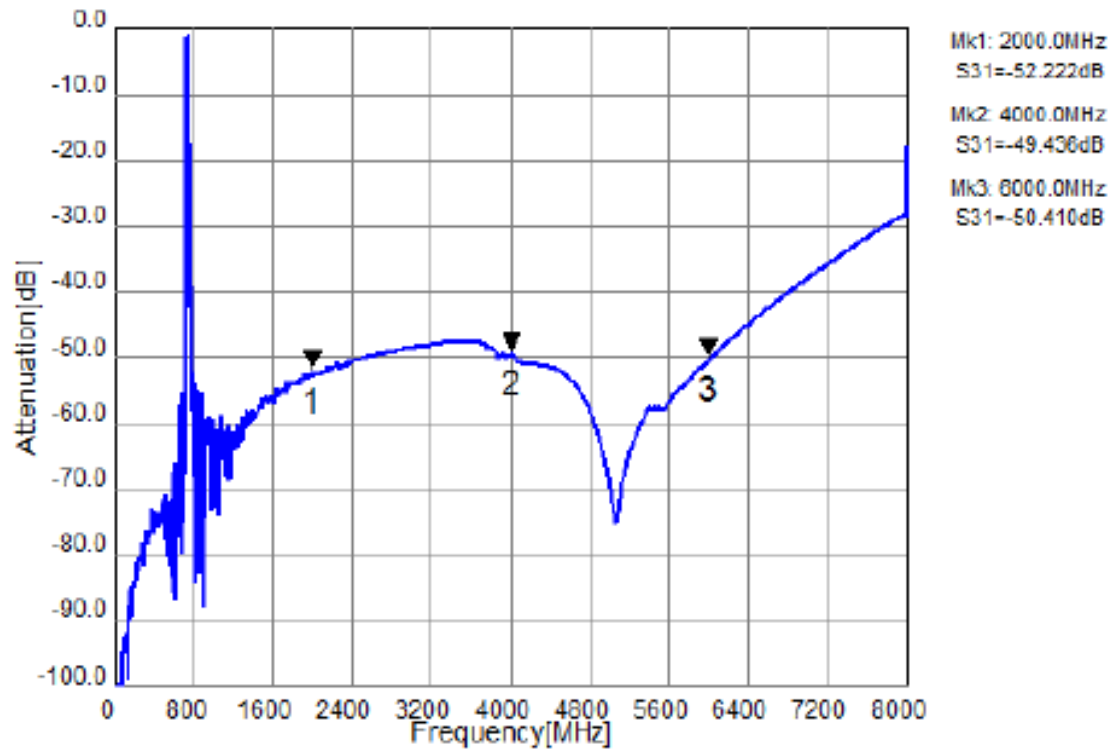
Ant Port



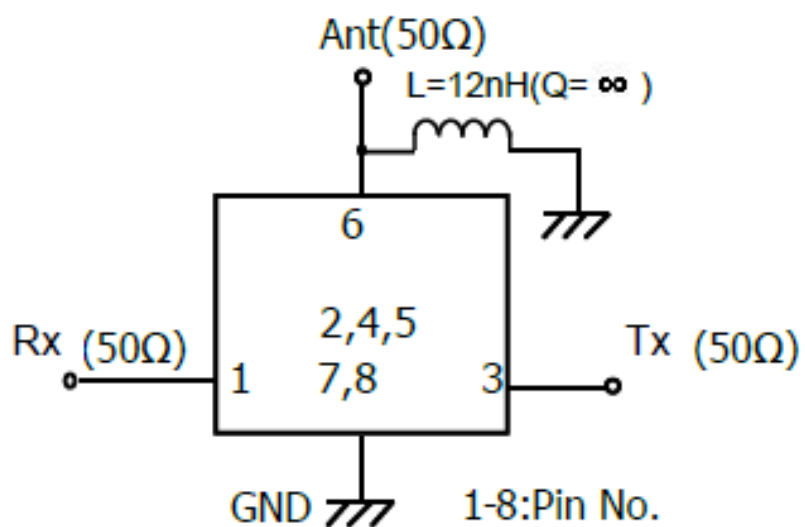
Tx to Ant (Wide Span)



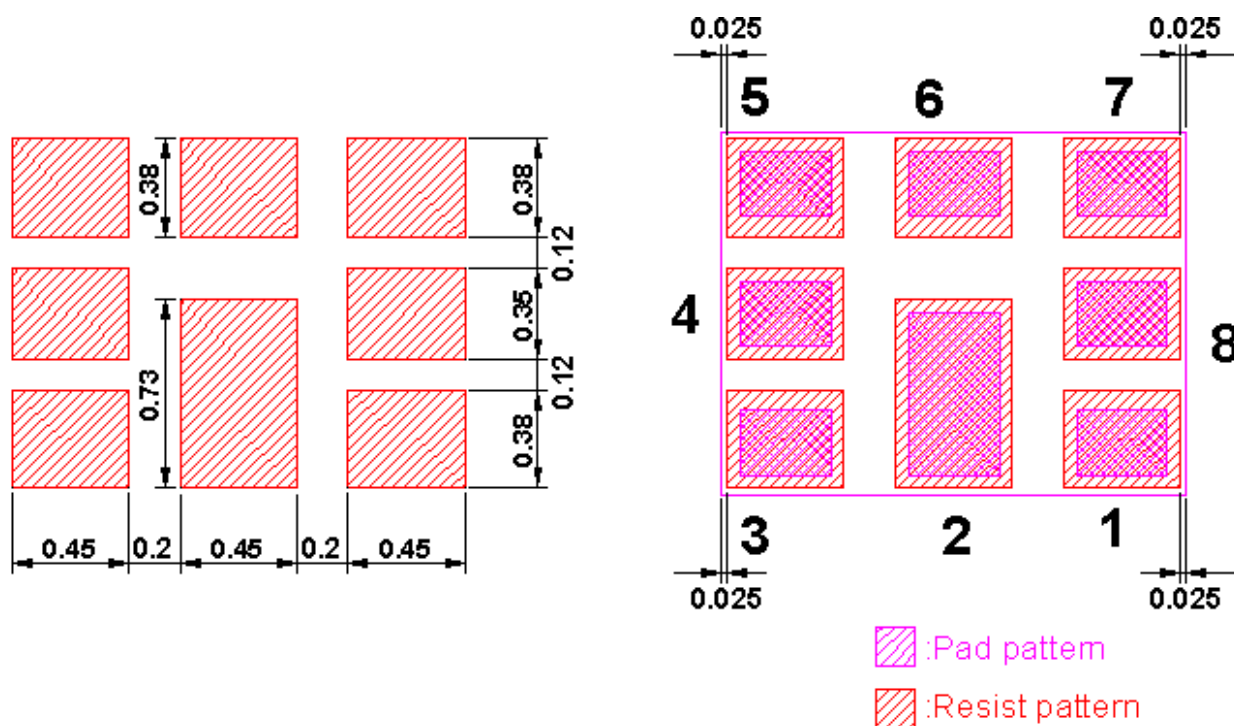
Ant to Rx (Wide Span)



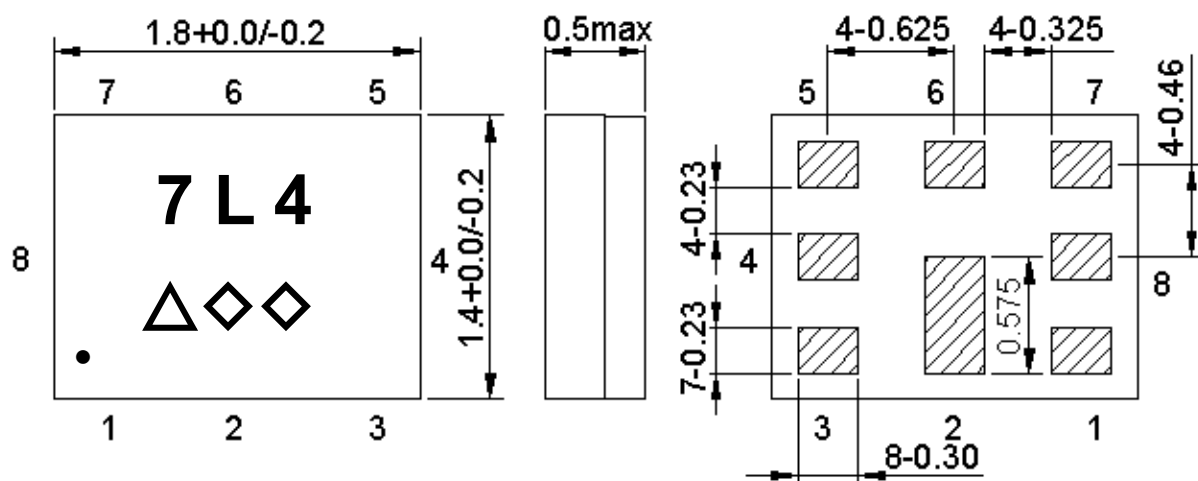
MEASUREMENT CIRCUIT:



FOOTPRINT:



OUTLINE DRAWING: (Mass Production)



Marking name : 7L4

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

◇◇: Lot Code.

Product Date Code. Follow below table.

Not Specified Tolerance : ± 0.05 mm

Coplanarity : 0.1 mm max.

1 to 8 : Pin No.

Unit : mm

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

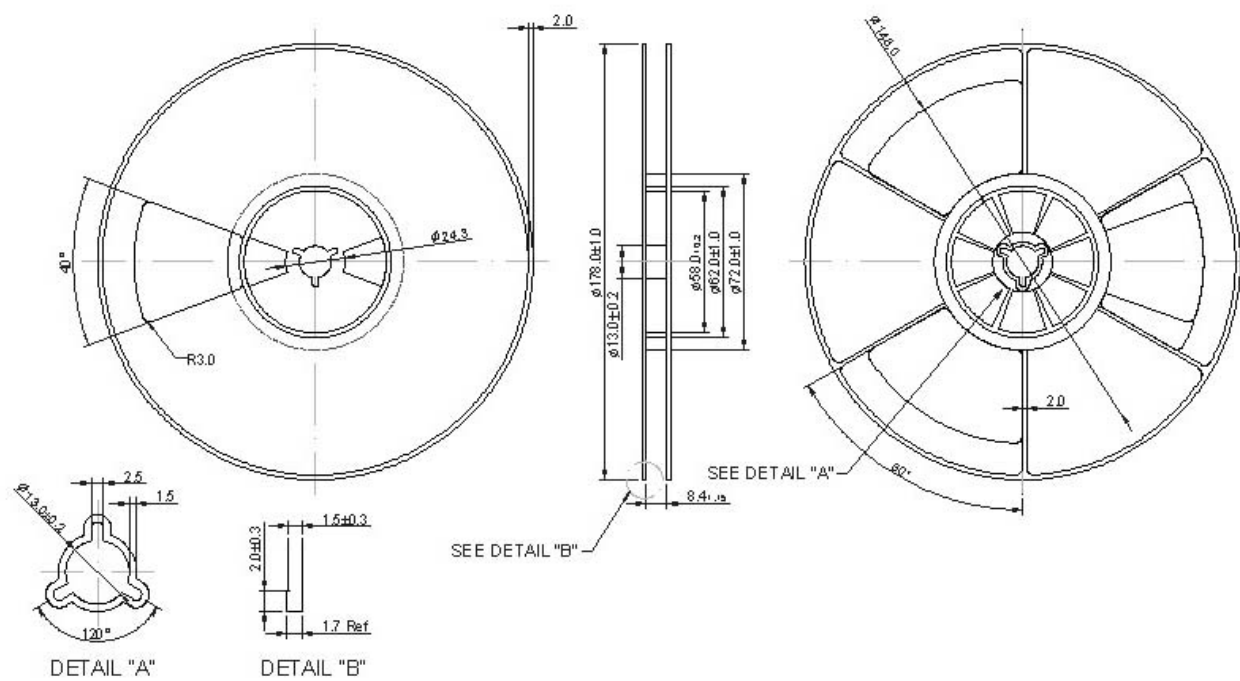
Pin assignment

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

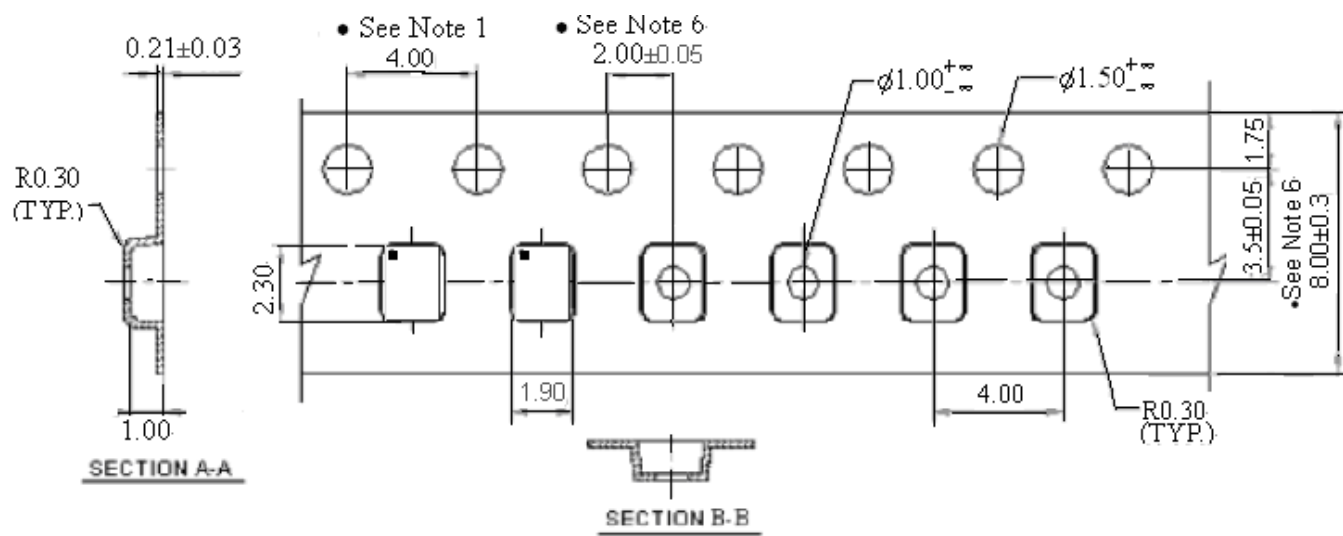
Figure 1. Dimensions and Pin assignment

PACKING:
REEL DIMENSION

Reel Count:
 7" = 3000
 13" = 10,000



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 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

