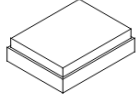


- **Complies with Directive per ANSI/EIA-481**
- **AEC-Q200 Qualified**
- **Use for LTE Band 3**

Maximum Rating

1. Input power : 29dBm (Ta=+50deg C,5000h,CW)
2. Maximum DC Voltage: +/-3 V
3. Operating temperature range: -40 °C to +85 °C
4. Storage temperature range: -40 °C to +85 °C
5. Moisture Sensitivity Level: 1
6. ESD 50V(MM) 150V(HBM)
7. Pre-aging condition to 150C/8hrs

SF2536NA
1747.5/1842.5 MHz SAW Duplexer

SM1814-8

Electrical Characteristics

- Terminating impedance(Tx Port): 50//10nH Ω
- Terminating impedance(Rx Port): 50//12nH Ω
- Terminating impedance(Ant Port): 50//4.3nH Ω

Tx to ANT

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	1710.15~ 1784.85 MHz	dB(*1)	-	2.3	3.0	-20~65°C
					3.3	-65~85°C
Ripple(any 5MHz)	1710.15~ 1784.85 MHz	dB	-	1.6	2.8	
VSWR	ANT	1710.15~ 1784.85 MHz	-	-	1.4	2.0
	Tx		-	-	1.4	2.0
Attenuation:						
1559 ~1586 MHz		dB	36	44	-	Compass, GPS
1597 ~1606 MHz		dB	33	43	-	GLONASS-
1805 ~1880 MHz		dB	40	52	-	Rx
2400 ~2500 MHz		dB	33	39	-	ISM
3420 ~3570 MHz		dB	25	32	-	2f0
5130 ~5355 MHz		dB	20	40	-	3f0

ANT to Rx

Parameters Description		Unit	Minimum	Typical	Maximum	Note
Insertion Loss	1805.15~ 1879.85 MHz	dB(*1)	-	2.1	2.9	0~85°C
					3.3	-20~0°C
Ripple		dB	-	1.4	2.8	
VSWR	ANT	-	-	1.6	2.3	
	Rx	-	-	1.5	2.2	
Attenuation:						
1710 ~ 1785 MHz		dB	50	54	-	Tx
2400 ~ 2500 MHz		dB	42	45	-	ISM
3610 ~ 3760 MHz		dB	47	57		2f0
5415 ~ 5640 MHz		dB	42	49		3f0

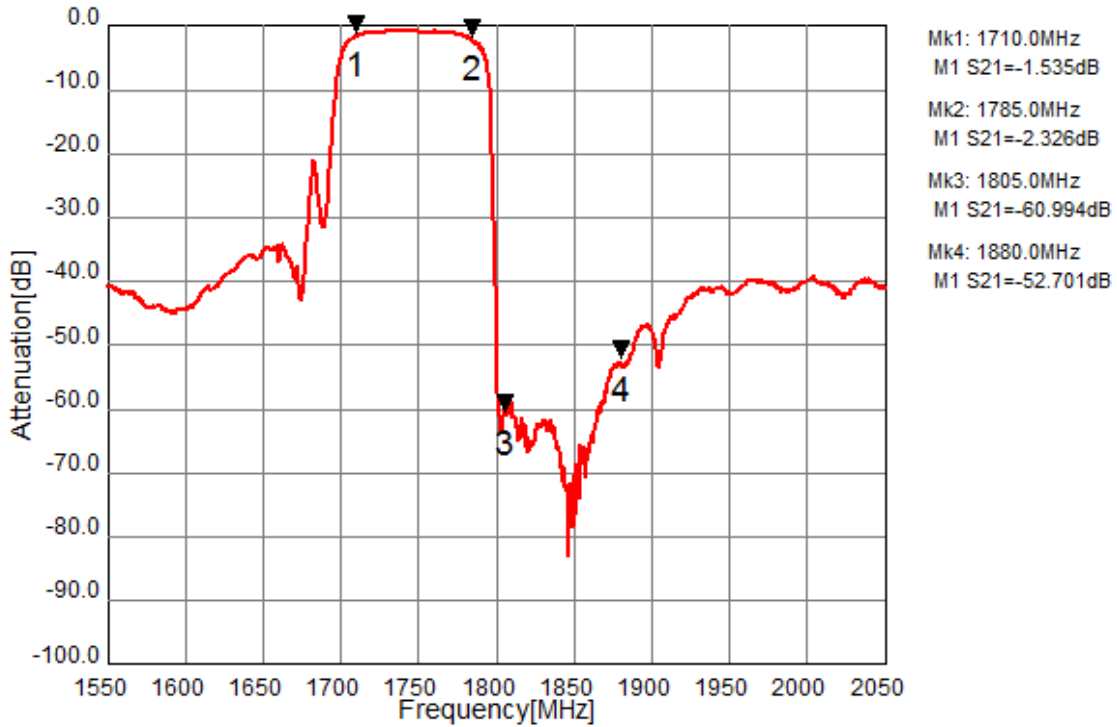
Tx to Rx

Isolation	1710.15 ~ 1784.85 MHz	dB	50	56	-	Tx
	1805.15 ~ 1879.85 MHz	dB	46		-	Rx -20~0°C
		dB	50	56		Rx +0~ +85°C

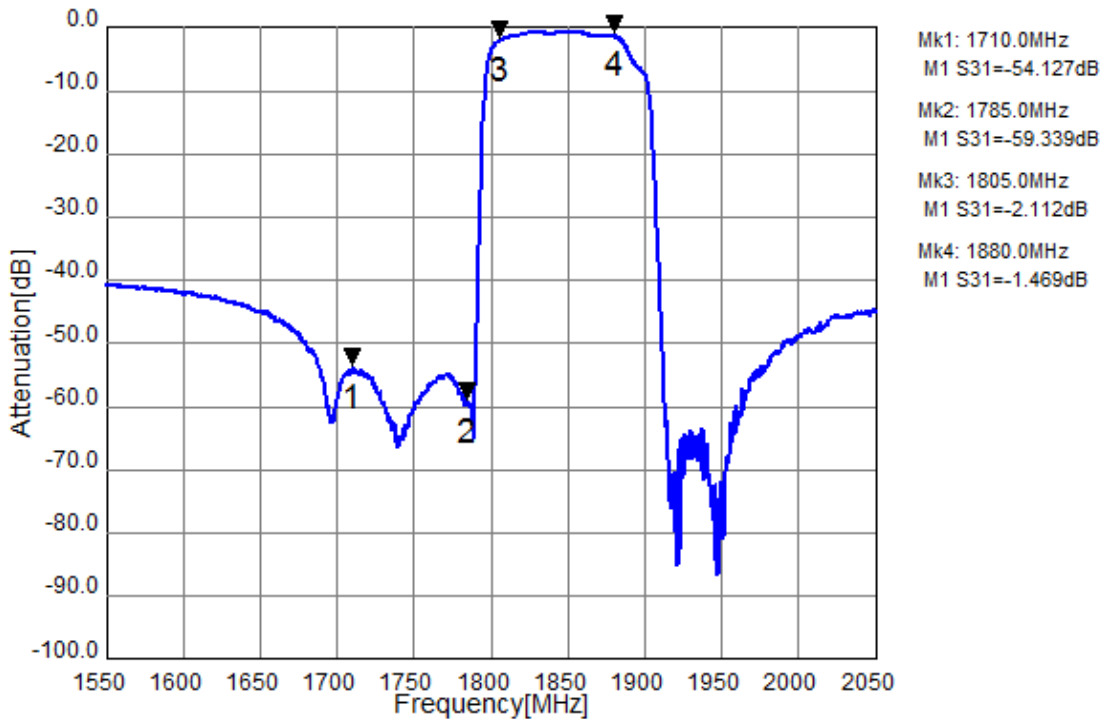
(*1) Specification of insertion loss excludes loss that comes from the test board.

Frequency Characteristics

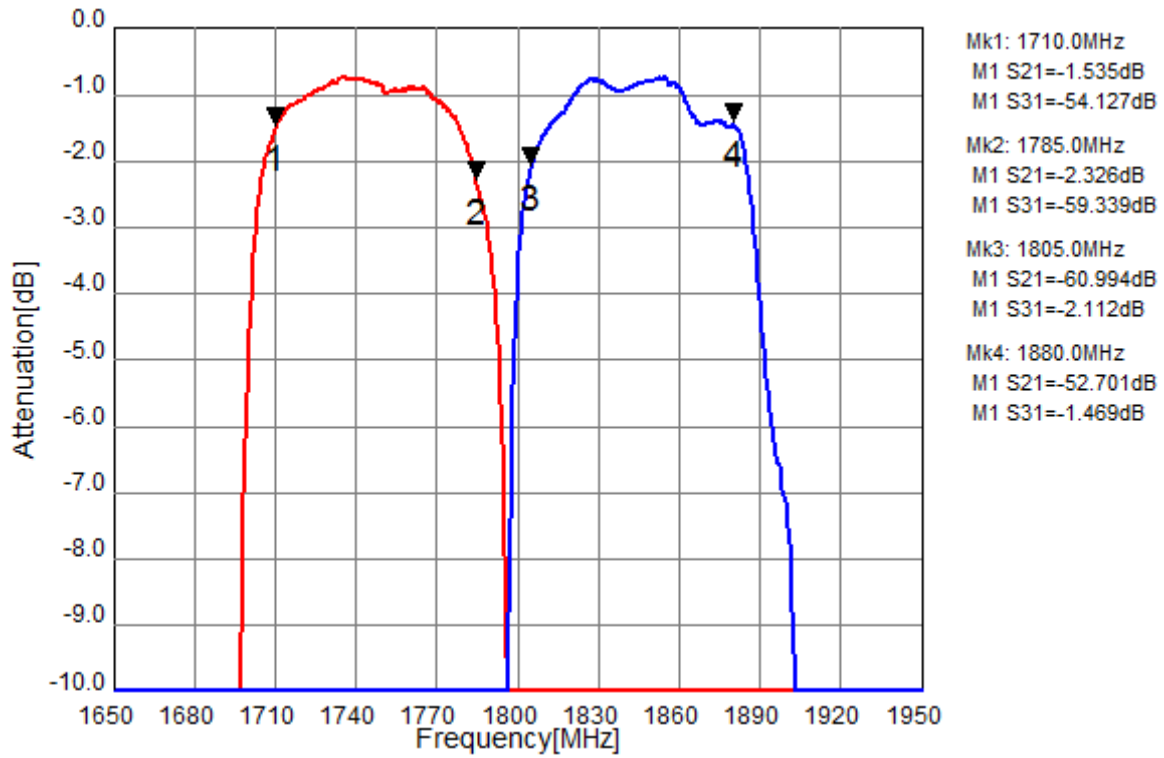
Tx to Ant



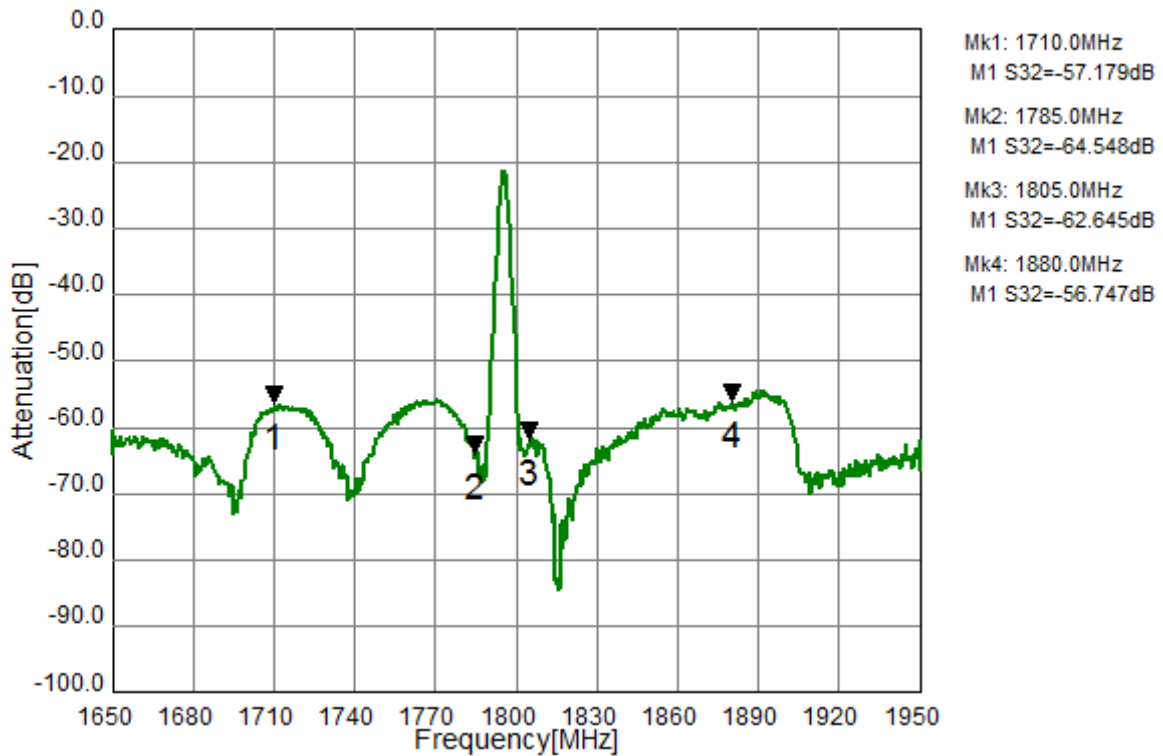
Ant to Rx



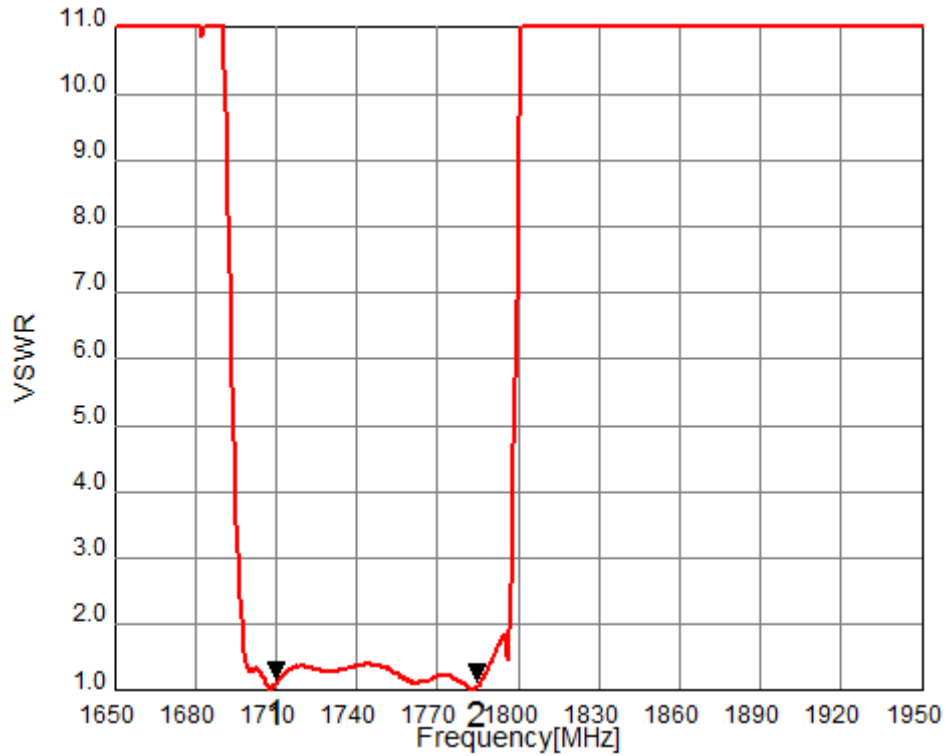
Tx to Ant, Ant to Rx



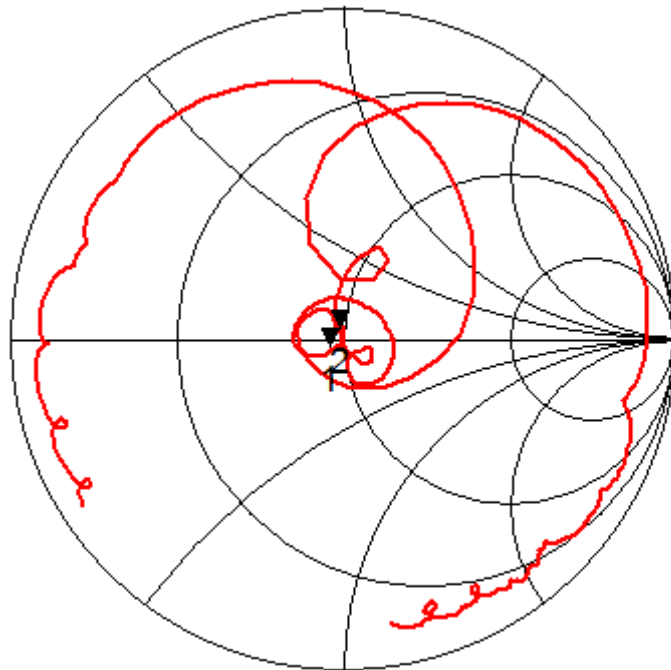
Tx to Rx Isolation



Tx Port

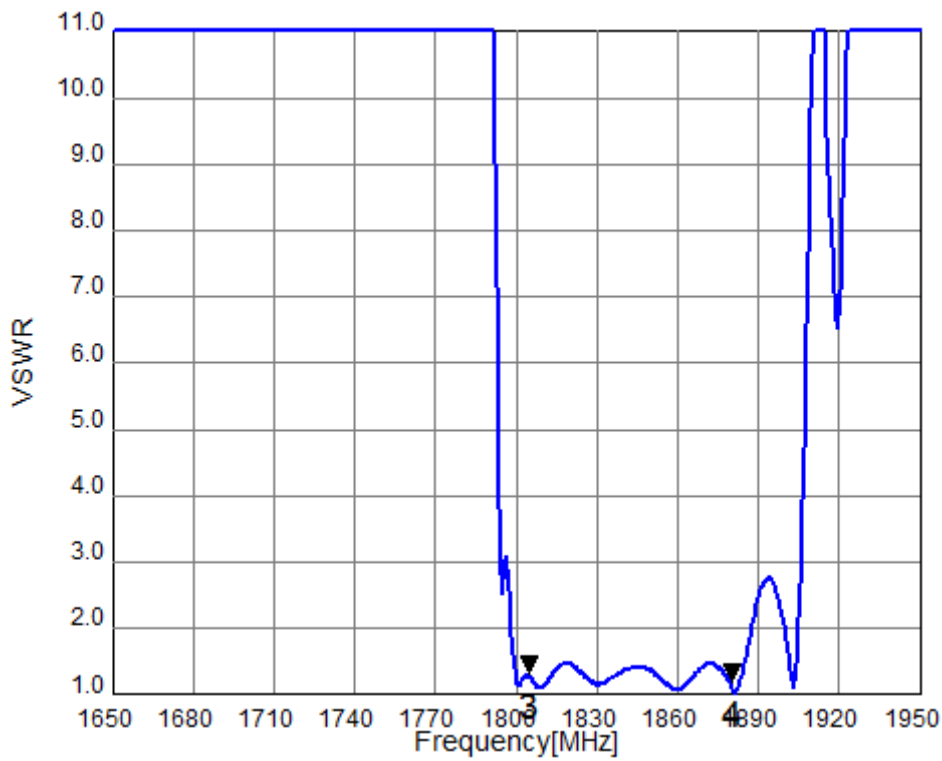


Mk1: 1710.0MHz
M1 VS2= 1.119
Mk2: 1785.0MHz
M1 VS2= 1.064

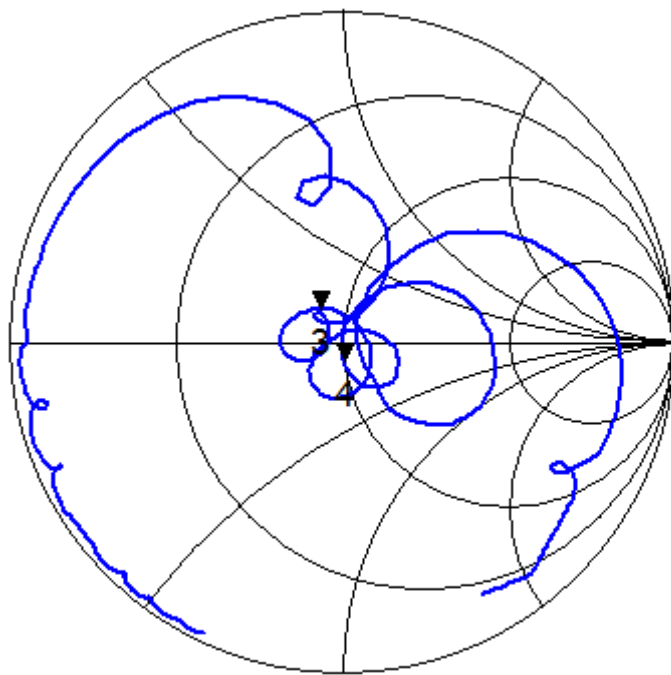


Mk1: 1710.0MHz
S22= 0.915 - j 0.066
Mk2: 1785.0MHz
S22= 0.973 + j 0.055

Rx Port

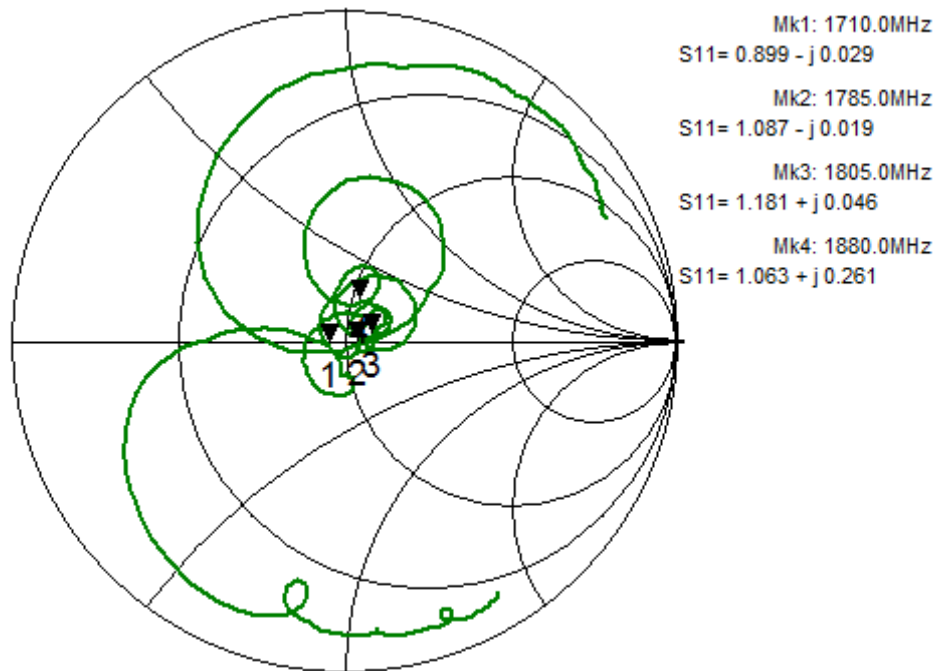
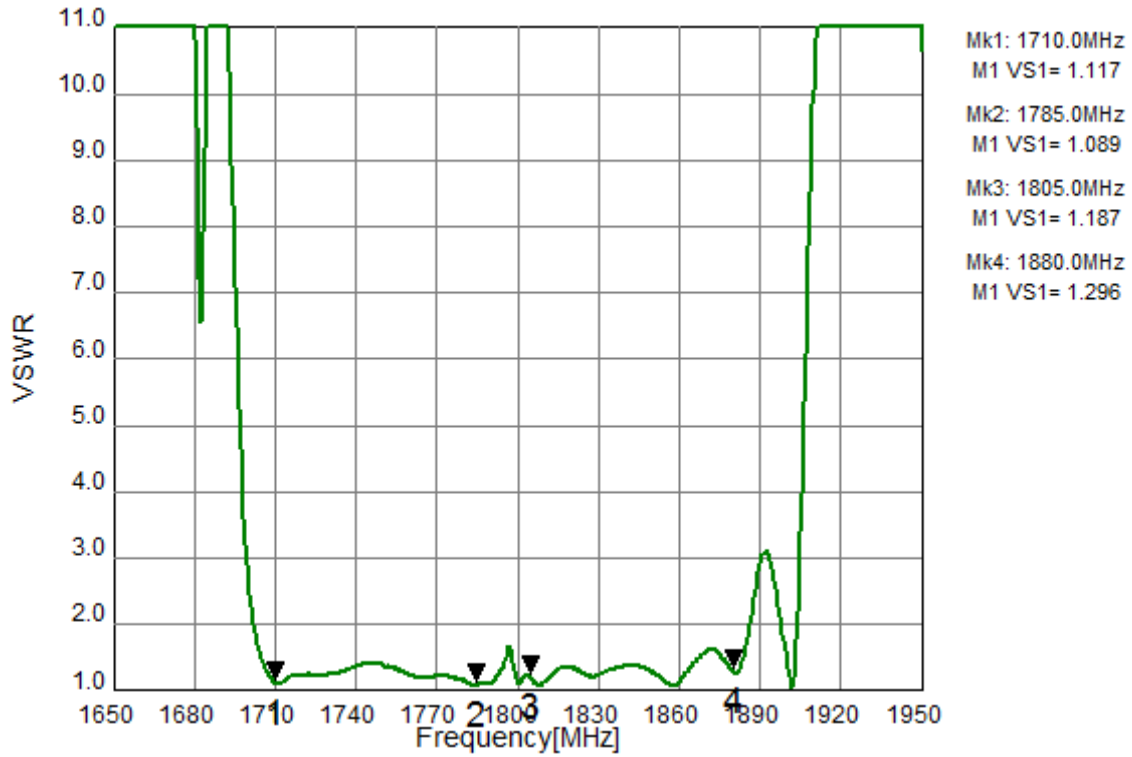


Mk3: 1805.0MHz
M1 VS3= 1.265
Mk4: 1880.0MHz
M1 VS3= 1.148

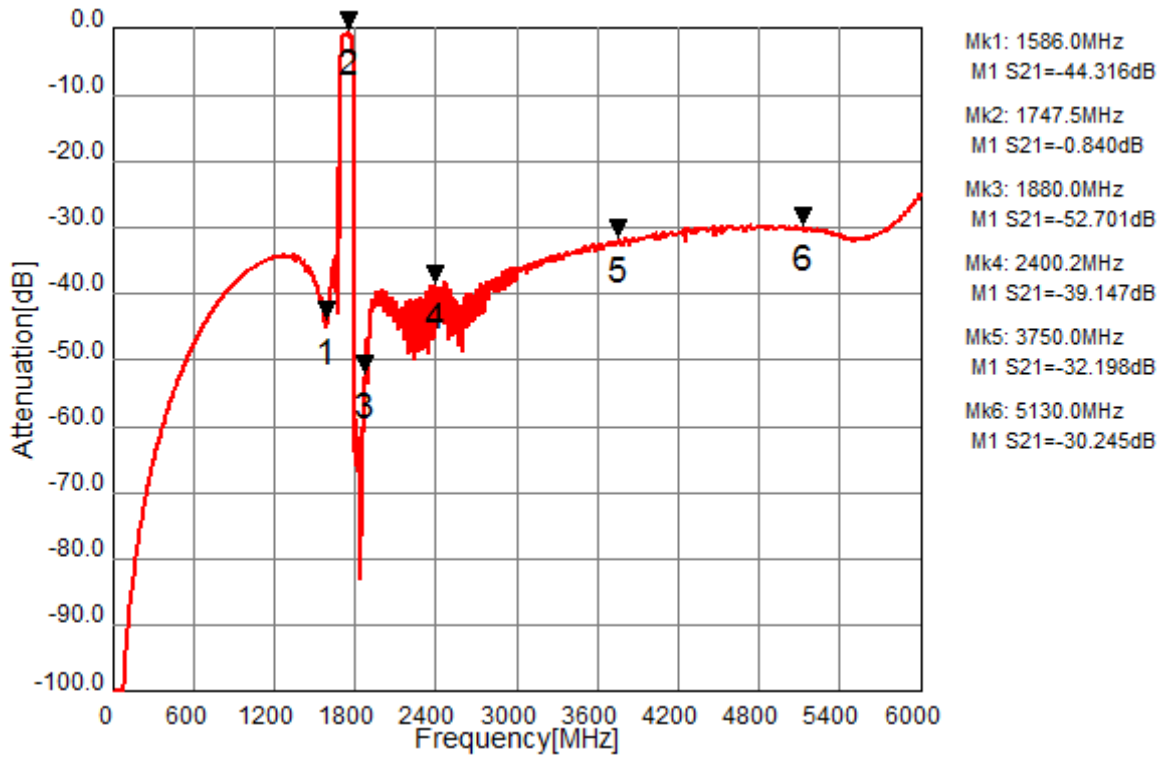


Mk3: 1805.0MHz
S33= 0.852 + j 0.160
Mk4: 1880.0MHz
S33= 1.007 - j 0.138

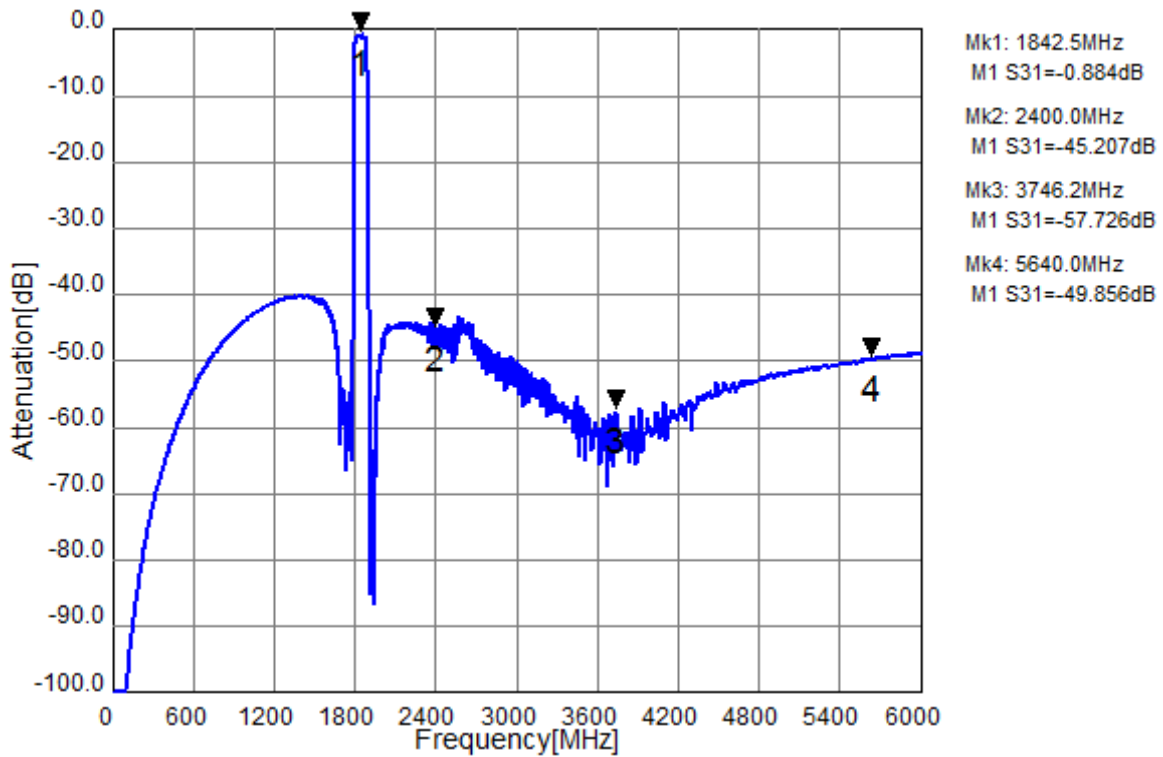
Ant Port



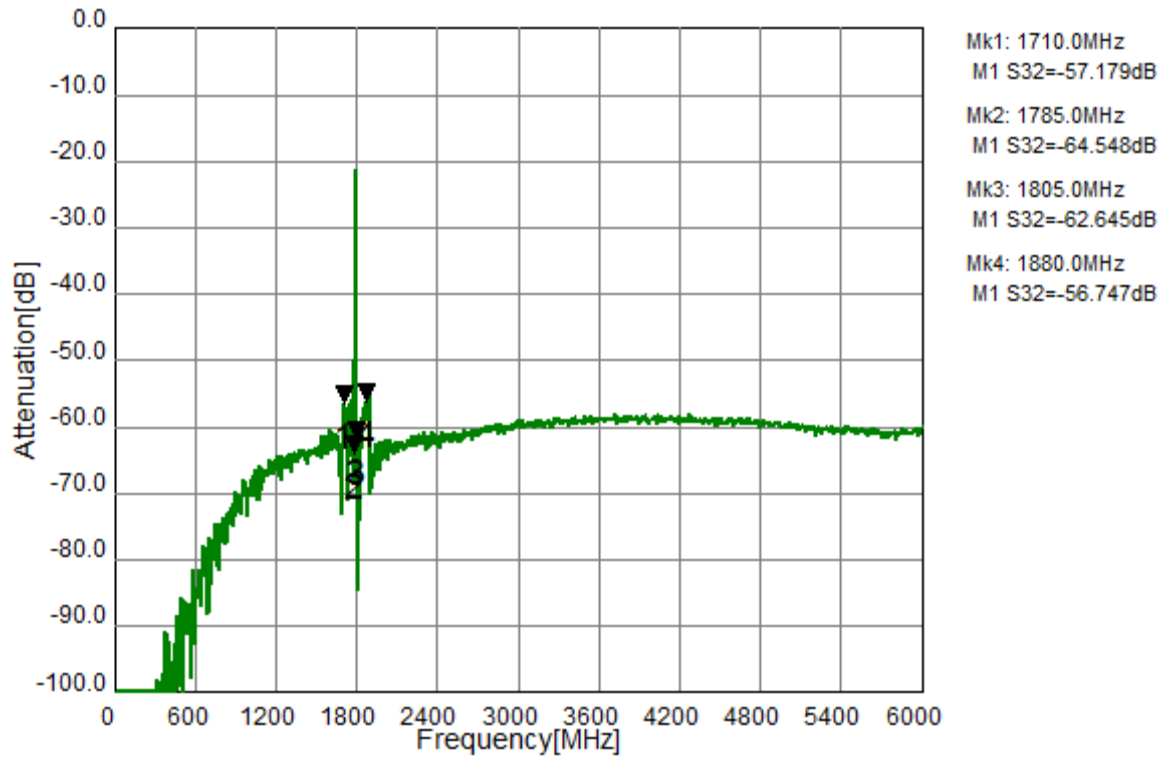
Tx to Ant (Wide span)



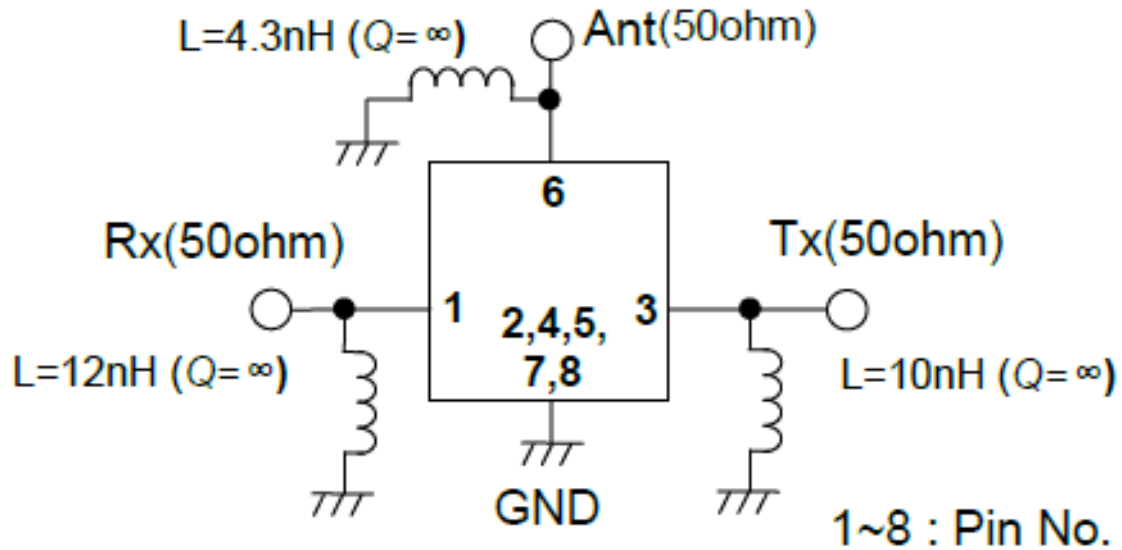
Ant to Rx (Wide span)



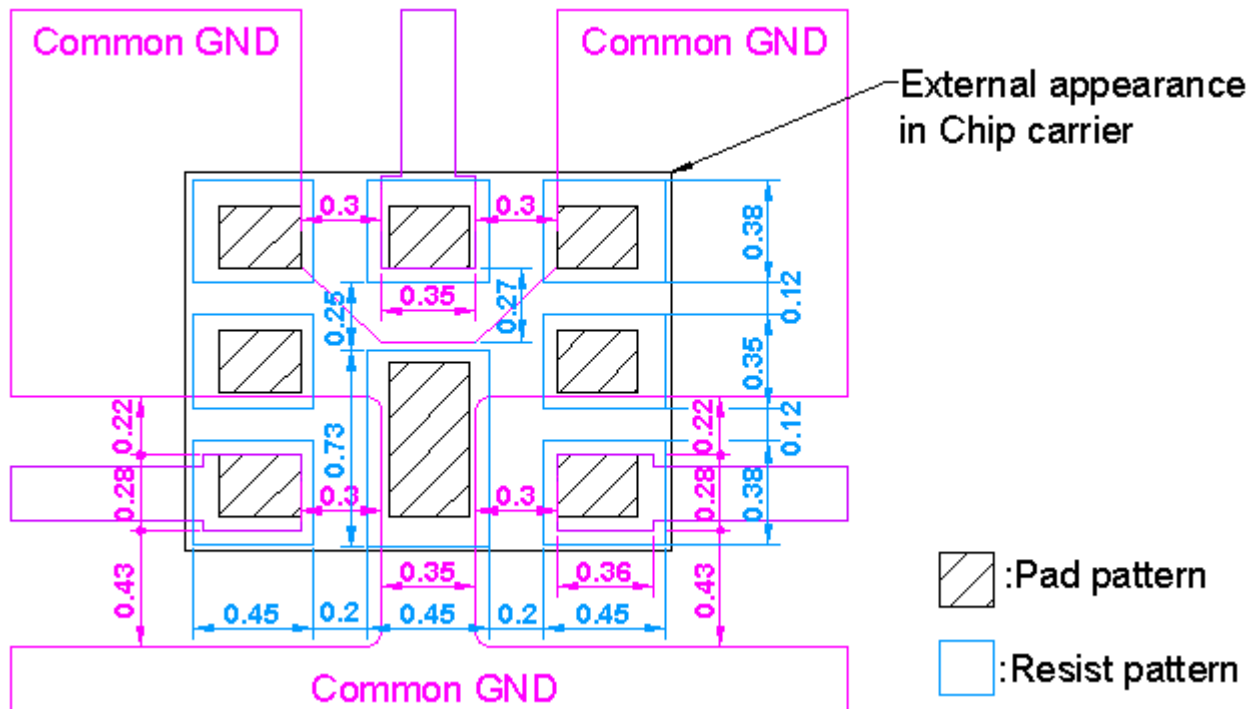
Tx to Rx Isolation(Wide span)



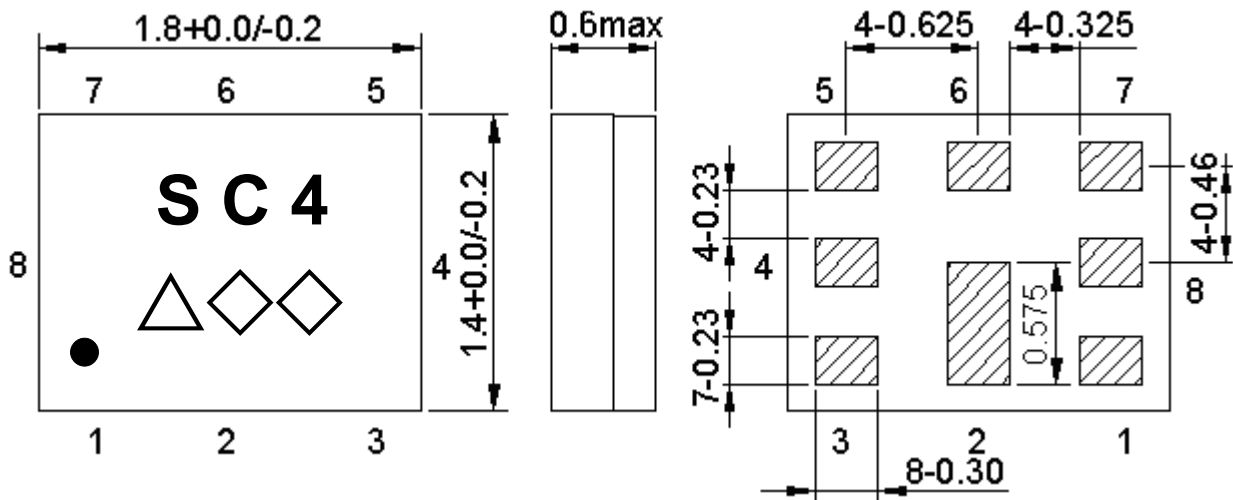
Measurement Circuit



Recommended foot print pattern



Outline Drawing: (Mass Production)



Marking name : C4

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

◇◇: Lot Code.

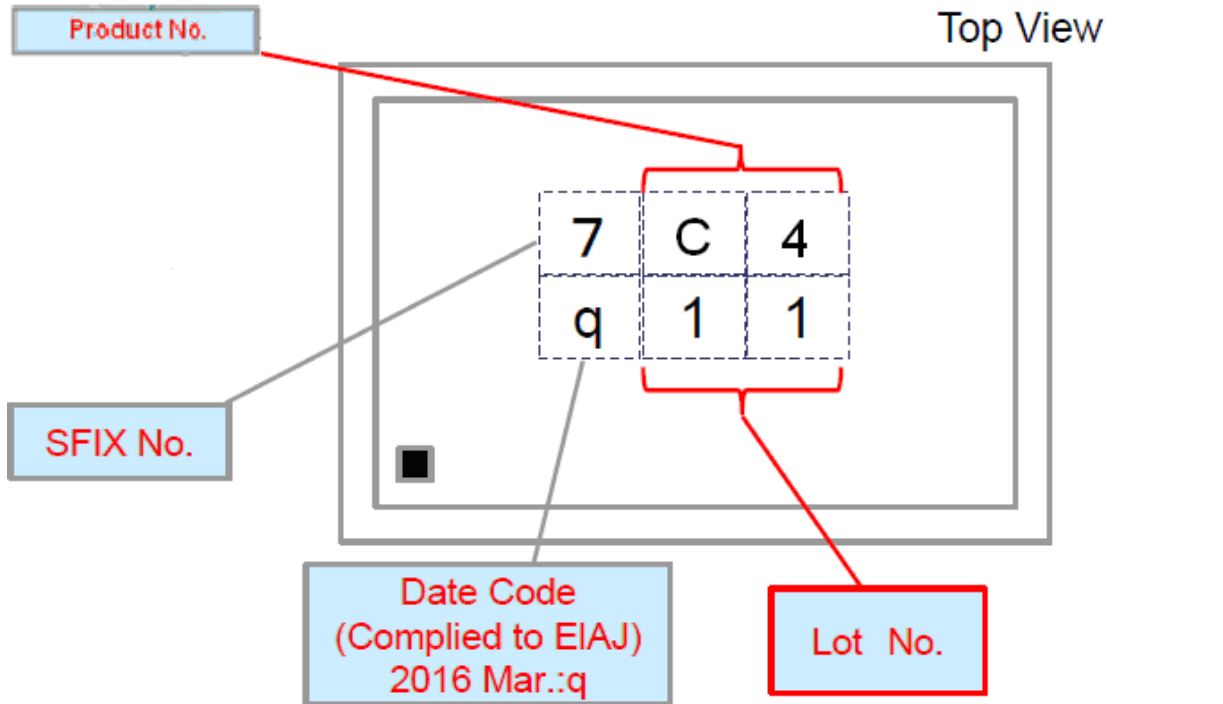
Product Date Code. Follow below table.

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

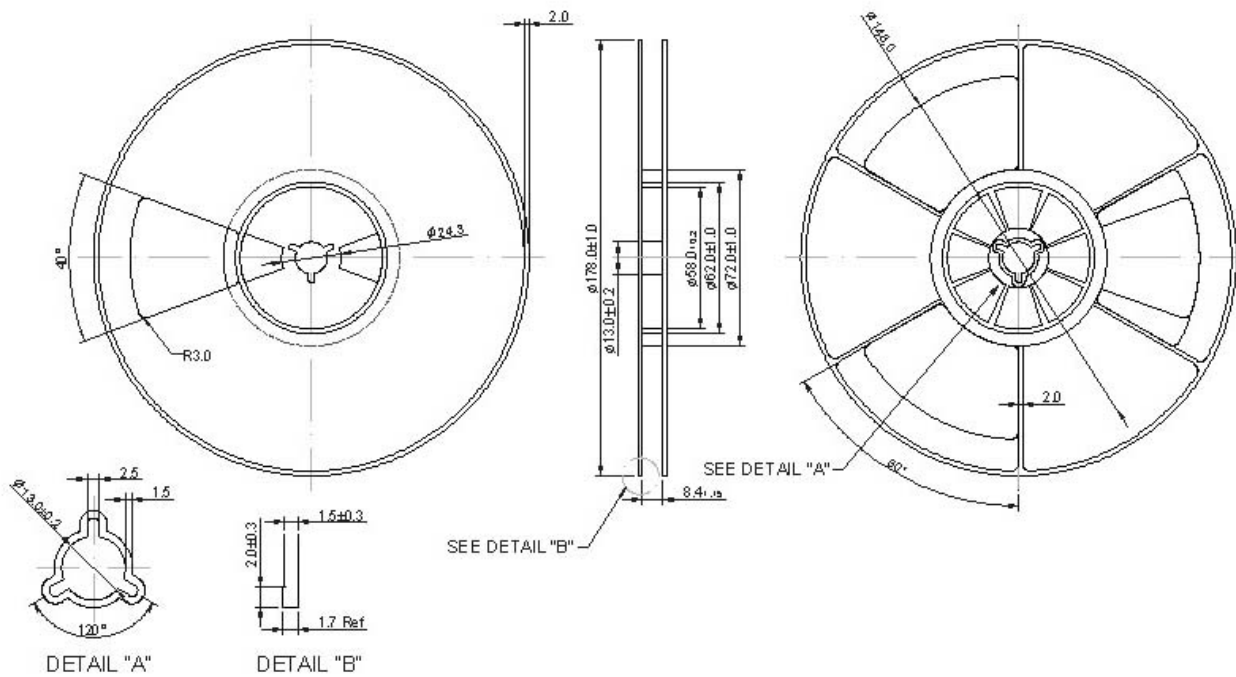
Top View (Sample Production):



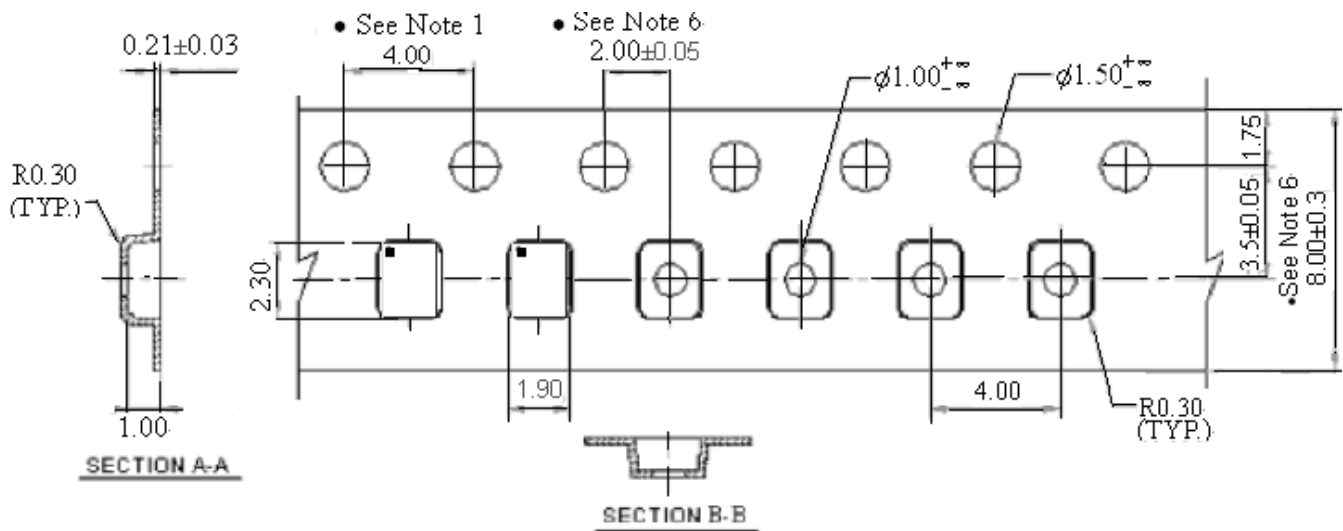
Lot No. is indicated by Arabic numerals 0 to 9 or characters A to Z and a to z (However, except I, O, l, l and o).

Reel Dimension

Reel Count:
7" = 3000



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 (20~40 seconds).
4. Time: 2 times

