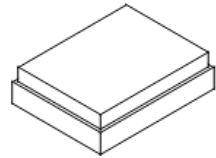


SF2586NA

1733/2133 MHz Filter Duplexer



SM1814

MAXIMUM RATING:

- Operating temperature range: -40 °C to +85 °C
- Storage temperature range: -40 °C to +85 °C
- Input power : 29dBm (Ta=+50degC,50kh,CW)
- Maximum DC Voltage: +/-3 V
- Moisture Sensitivity Level: Level 1
- ESD 50V(MM) 100V(HBM)
- AEC-Q200 Qualified

ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50//9.1nH Ω (Single-ended)

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

Terminating impedance (Ant Port): 50//4.3nH Ω (Single-ended)

Tx to ANT (f_{T0} =1733 MHz)

Parameters Description			Unit	Min	Typ	Max	Remarks
Insertion Loss		1710~1755MHz	dB(*1)	-	1.5	2.0	
Amplitude ripple		1710~1755MHz	dB	-	0.6	1.2	
VSWR	Tx	1710~1755MHz	-	-	1.6	2.0	
	ANT		-	-	1.6	2.0	
Attenuation:							
1559~1585.42 MHz			dB	40	43	-	
2110~2155 MHz			dB	44	52	-	
2400~2500 MHz			dB	36	42	-	
3420~3510 MHz			dB	29	35	-	
5130~5265 MHz			dB	21	28	-	



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.

ANT to Rx (f_{T0}=2133 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks	
Insertion Loss		2110~2155 MHz	dB(*1)	-	1.7	2.2	
Amplitude ripple		2110~2155 MHz	dB	-	0.4	1.0	
VSWR	ANT	2110~2155 MHz	-		1.5	2.0	
	Rx		-		1.6	2.0	
Attenuation:							
1710~1755 MHz			dB	44	50	-	
2400~2500 MHz			dB	35	41	-	
3820~3910 MHz			dB	36	43	-	

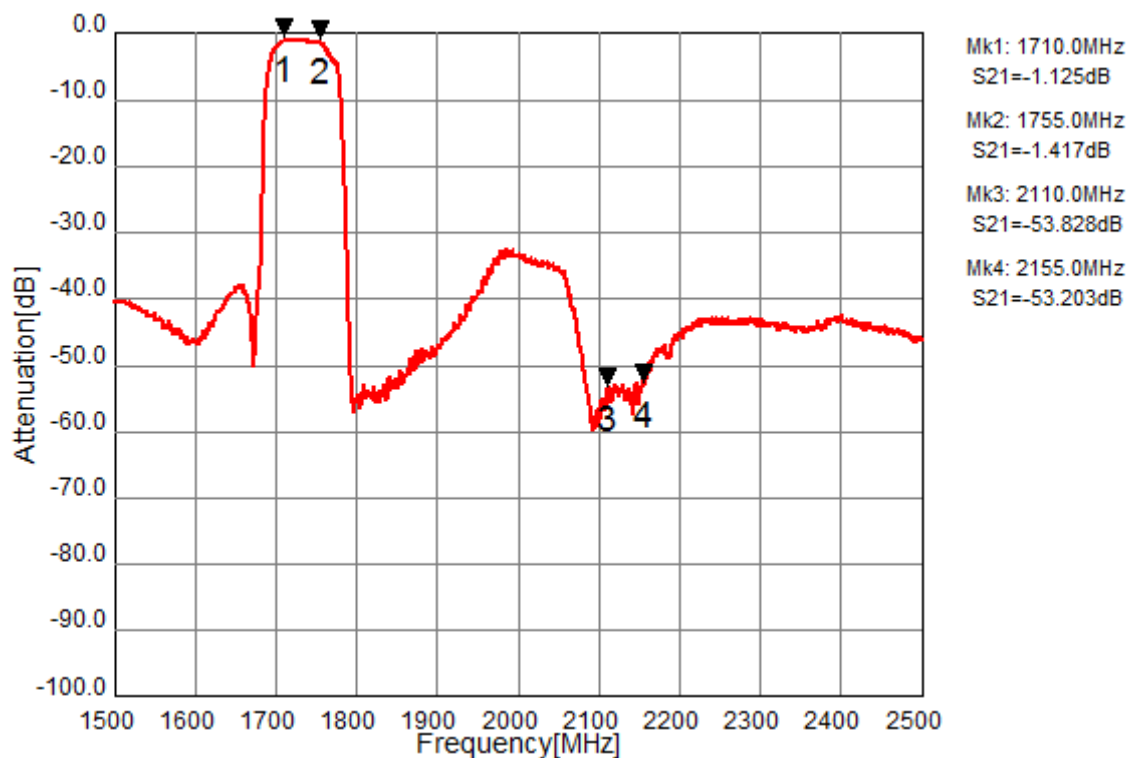
Tx to Rx

Isolation	1710~1755 MHz	dB	52	57	-	
	2110~2155 MHz	dB	50	55	-	

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

FREQUENCY CHARACTERISTICS:

Tx to Ant



Ant to Rx

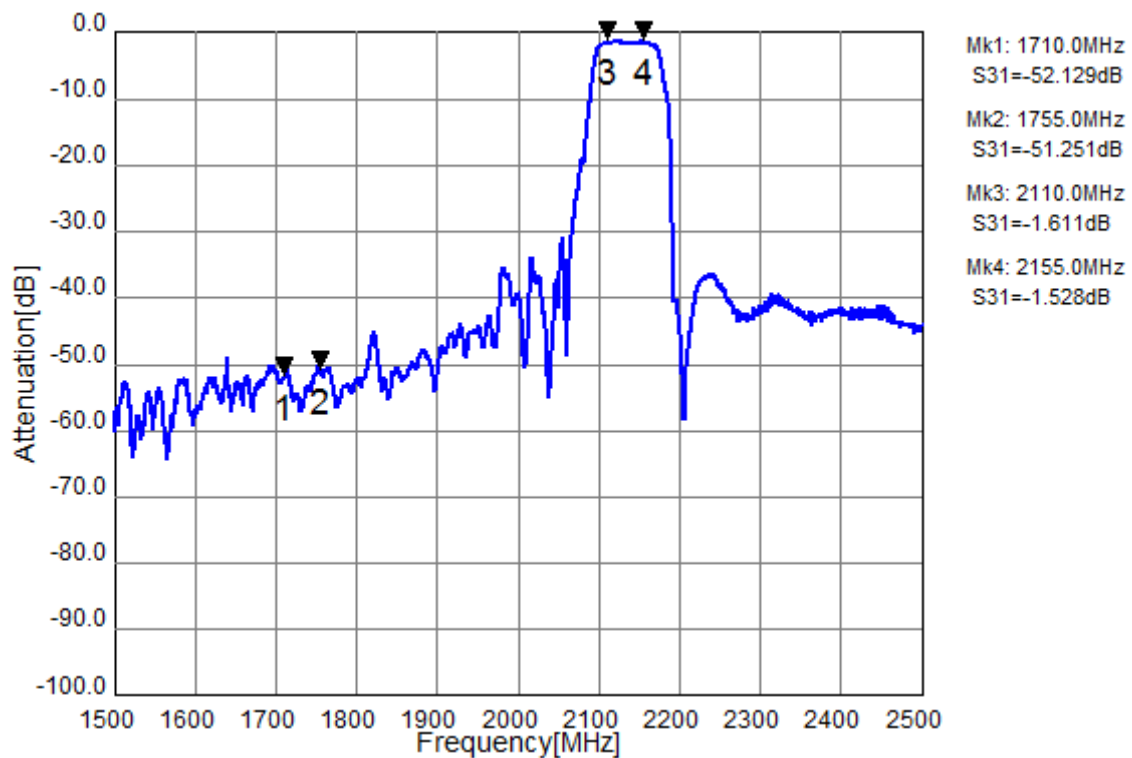
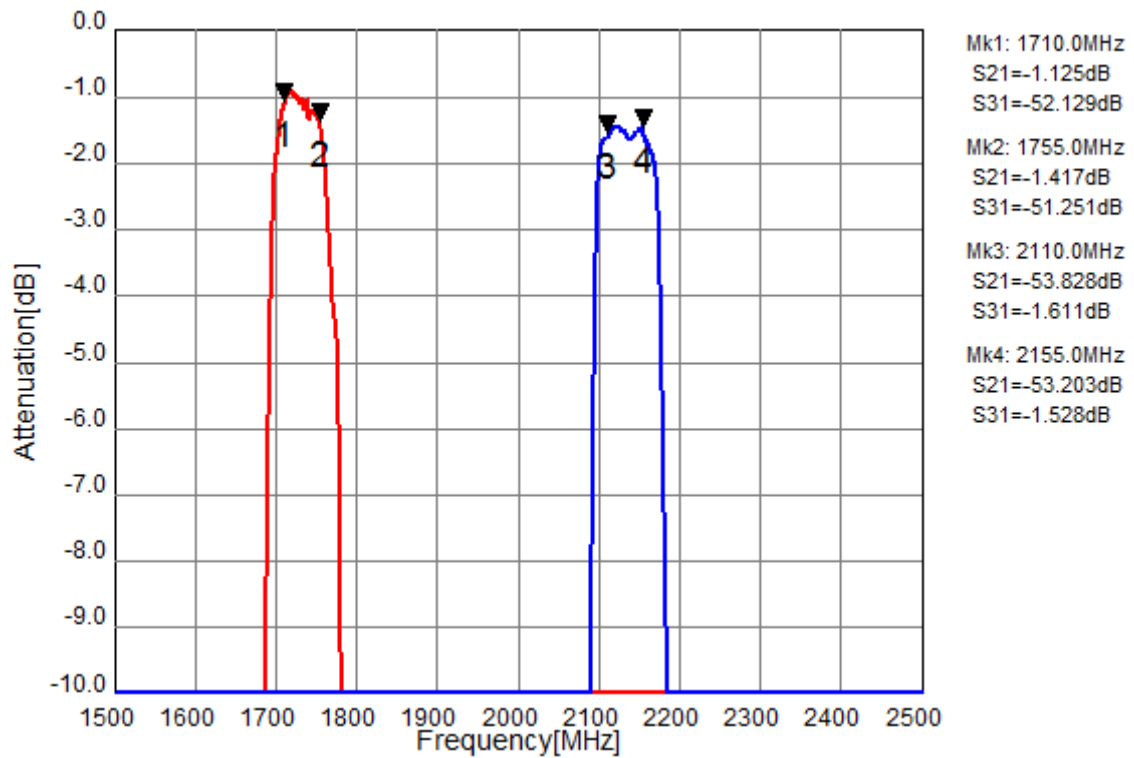


Figure 3-1. Electrical Characteristics

These data **exclude** loss that comes from the test board.

Tx to Ant ,Ant to Rx



Tx to Rx Isolation

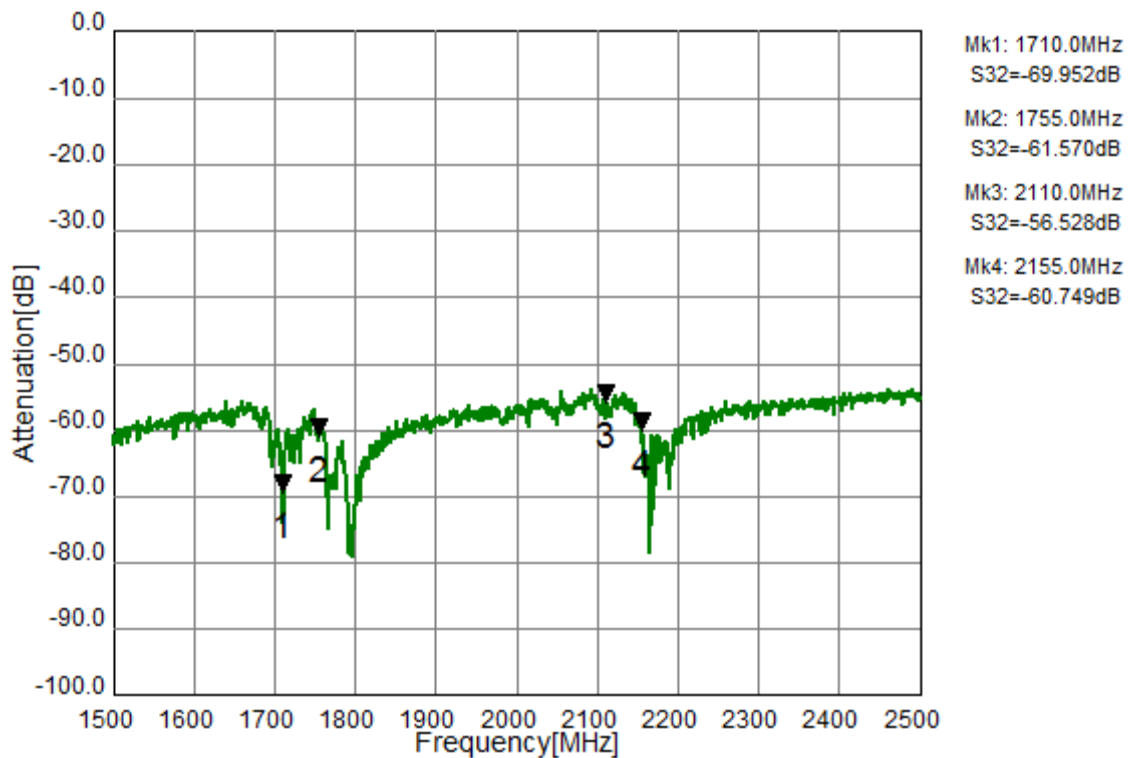


Figure 3-2. Electrical Characteristics

These data **exclude** loss that comes from the test board

Tx Port

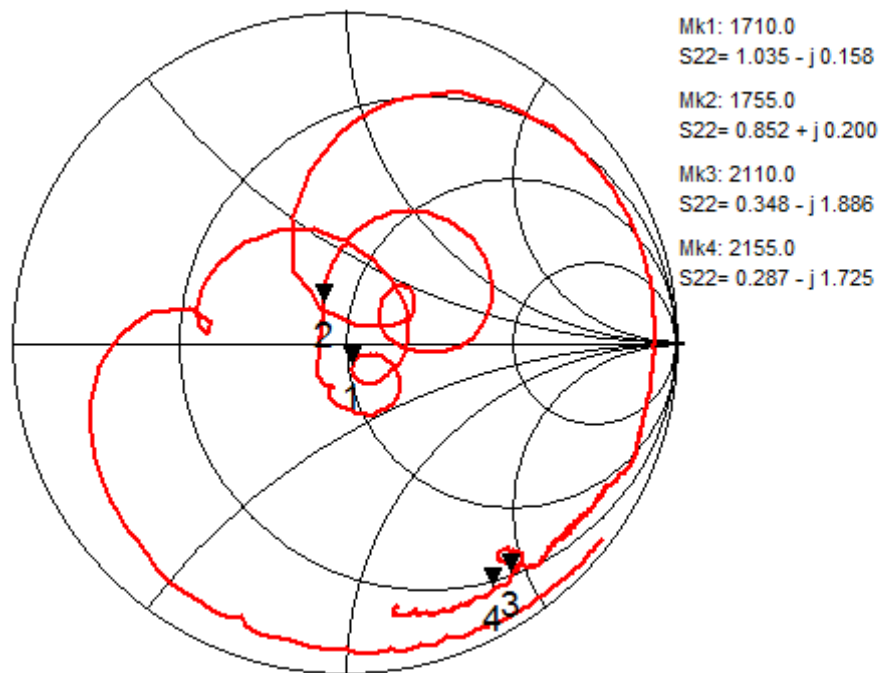
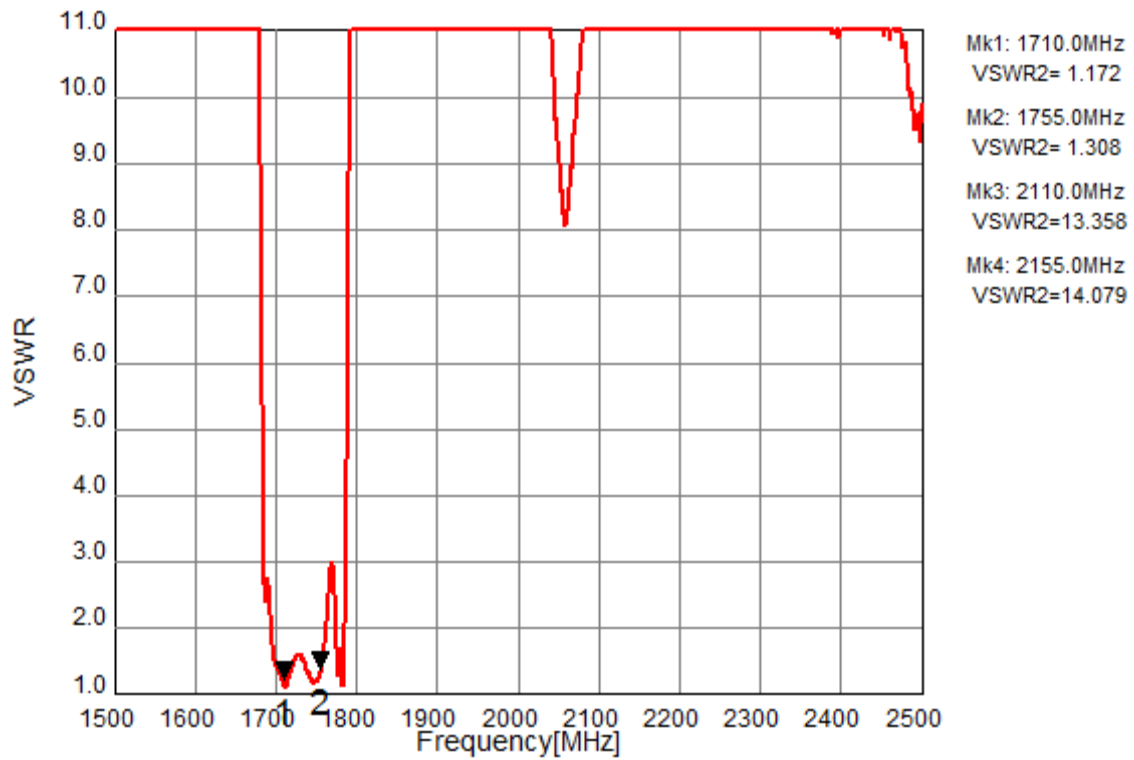


Figure 3-3. Electrical Characteristics

Rx Port

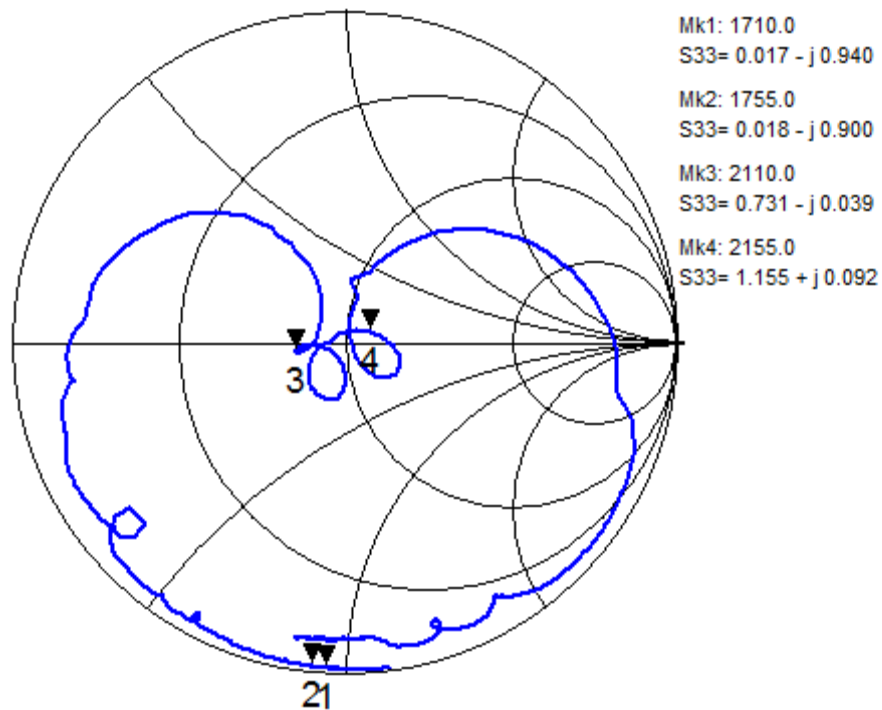
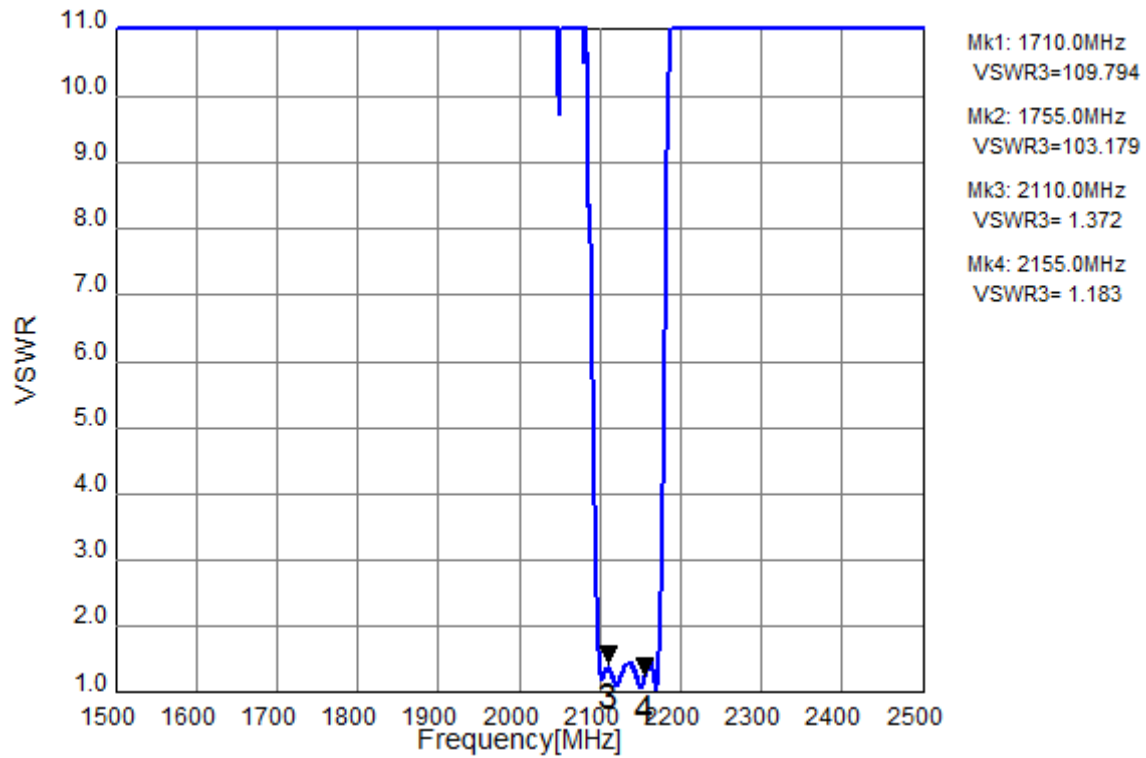


Figure 3-4. Electrical Characteristics

Ant Port

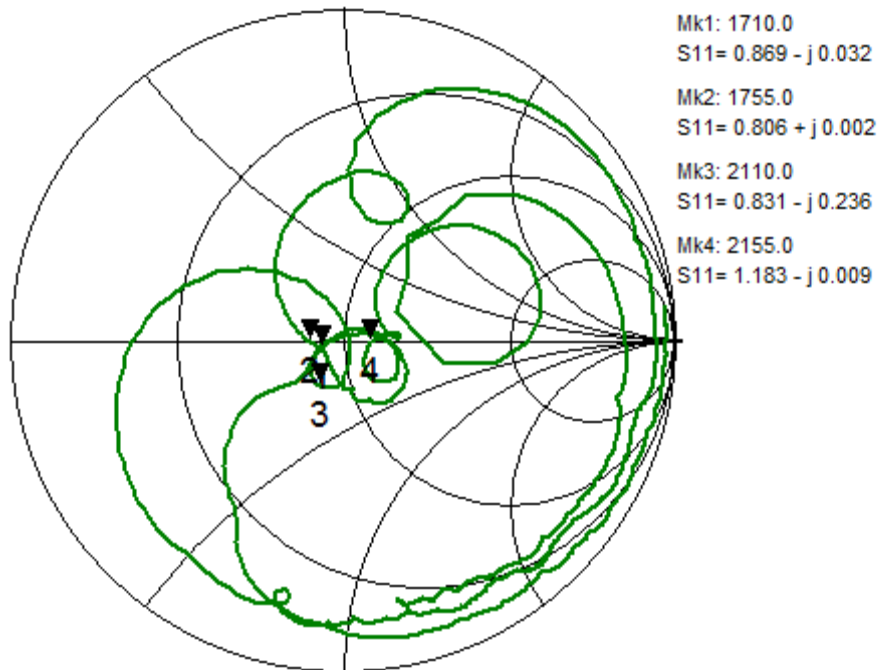
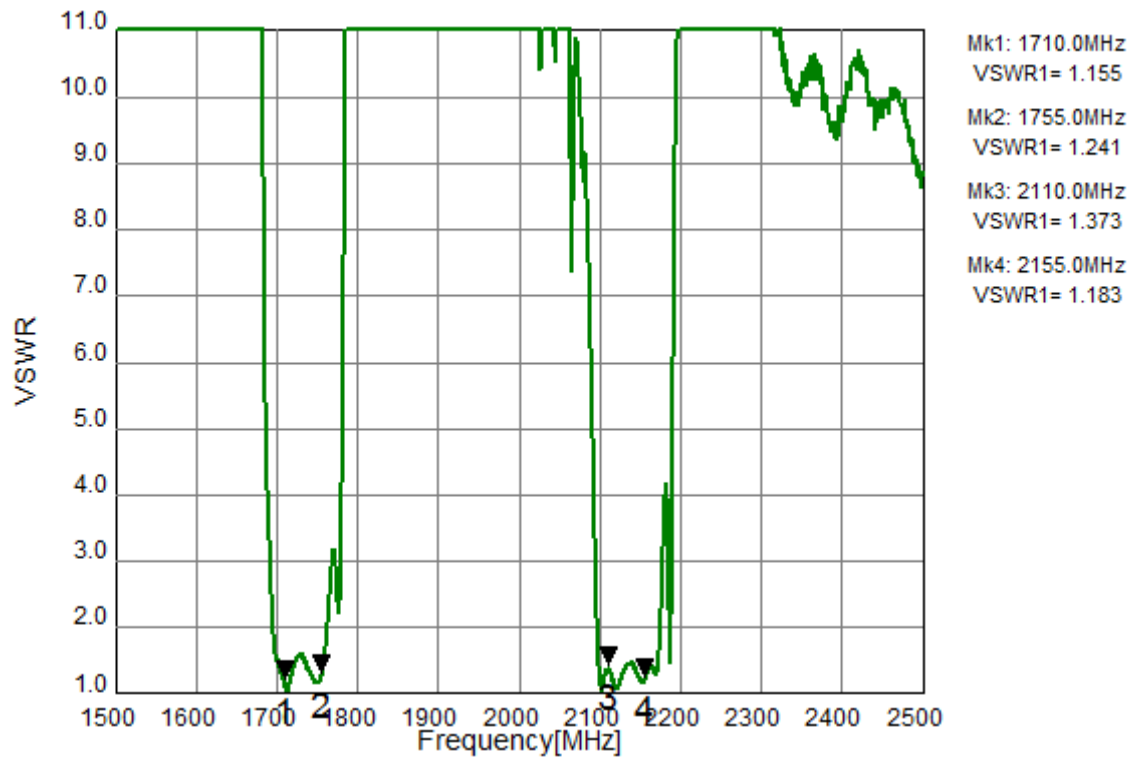
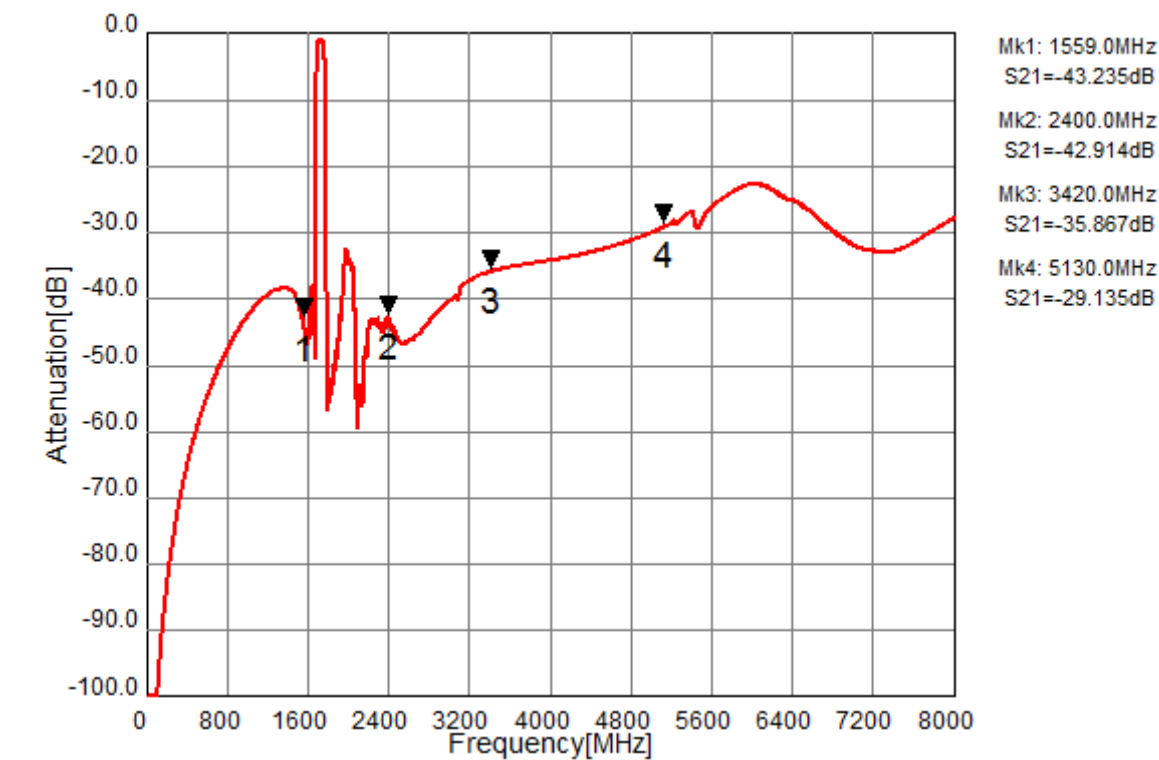


Figure 3-5. Electrical Characteristics

Tx to Ant (Wide span)



Ant to Rx (Wide span)

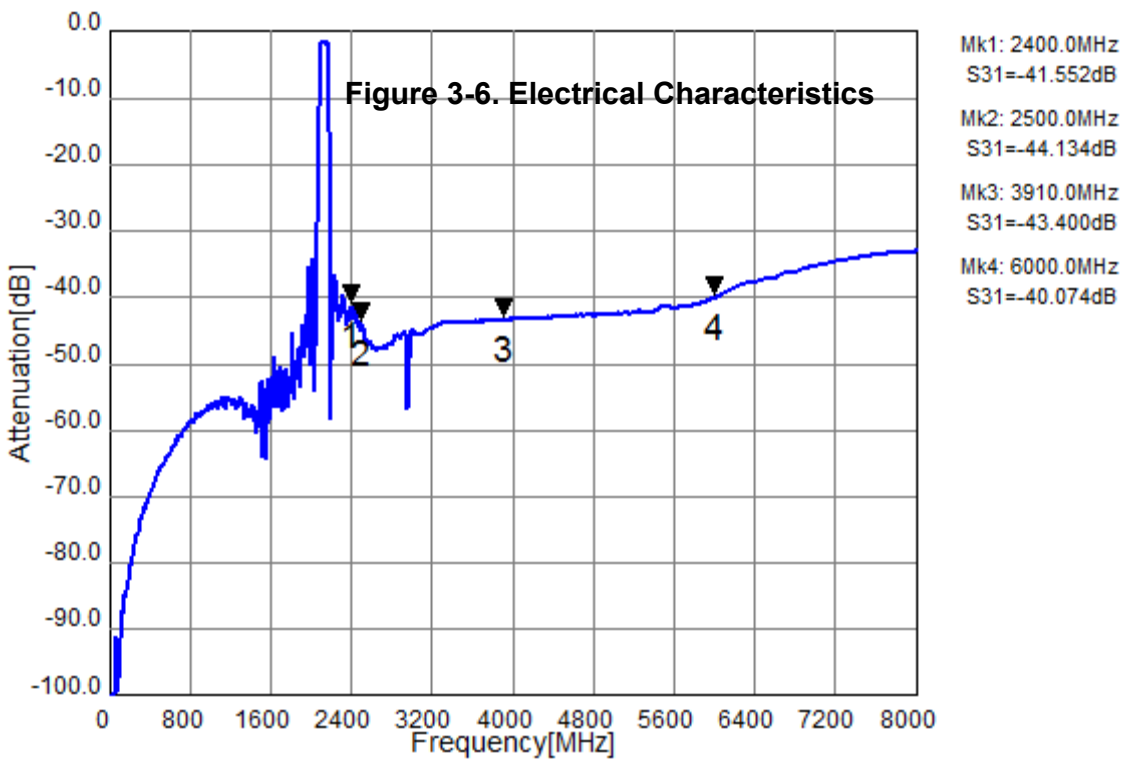
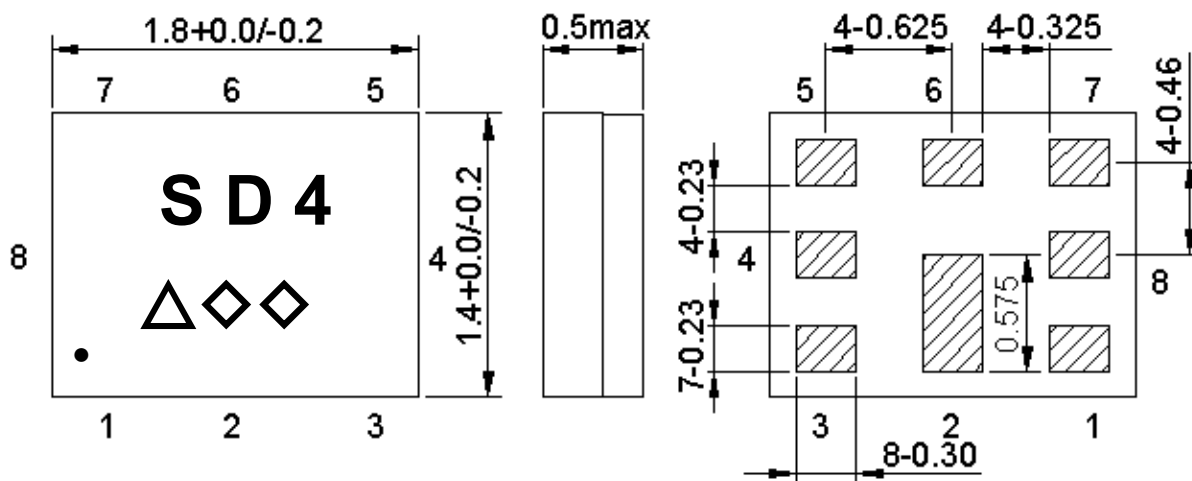


Figure 3-6. Electrical Characteristics

OUTLINE DRAWING:



Marking name : SD4

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

◇◇: Lot Code.

Product Date Code. Follow below table.

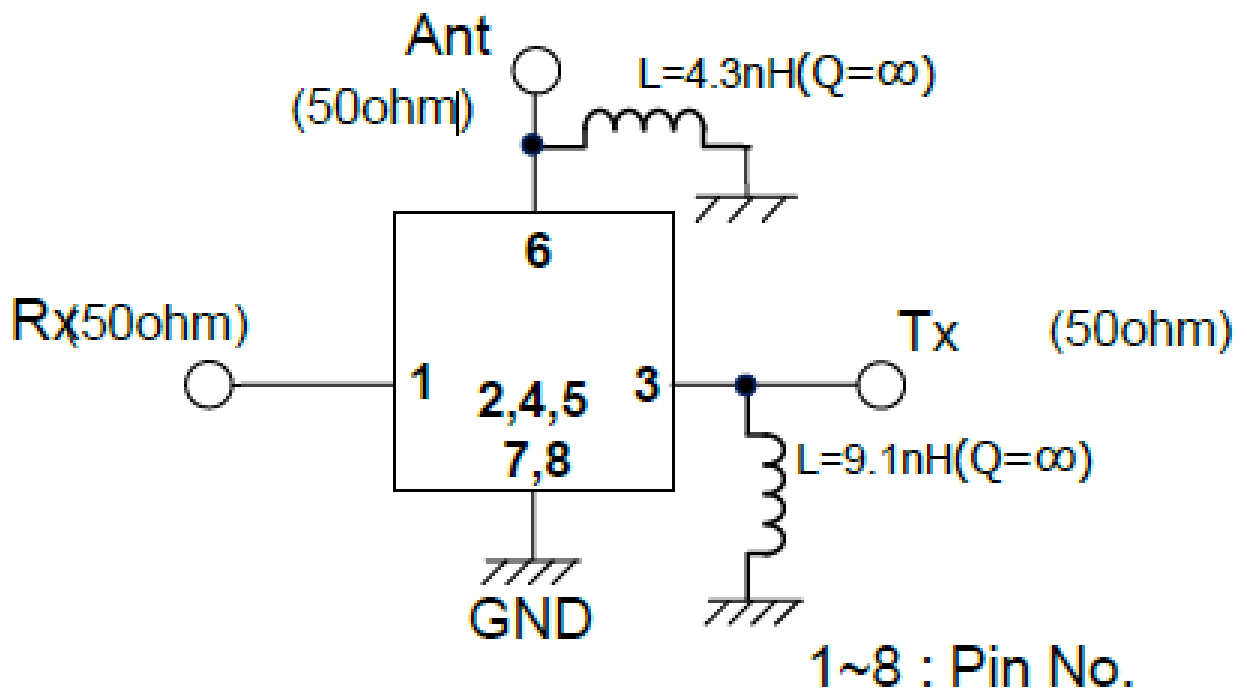
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m

Pin Configuration

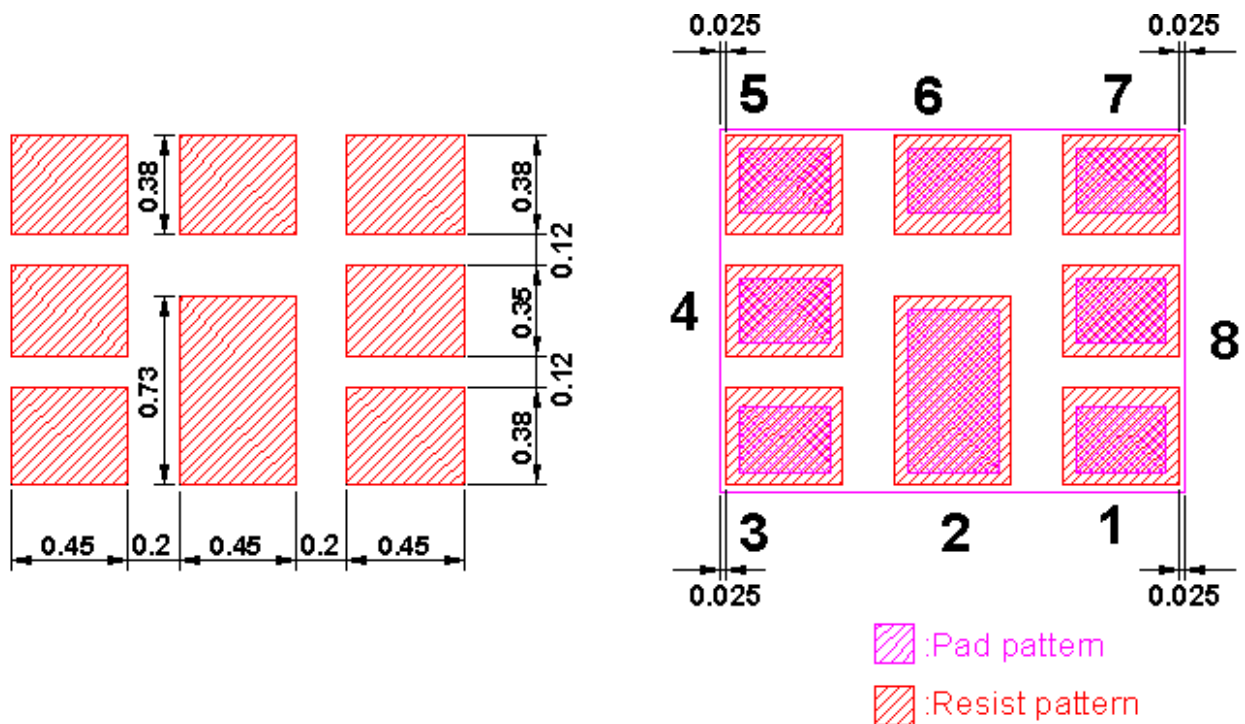
Pin No.	Pin name	Description
1	Rx	Receiver Pin
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	GND	Ground Pin

Figure 1. Dimensions and Pin assignment

Evaluation Circuit



FOOTPRINT:

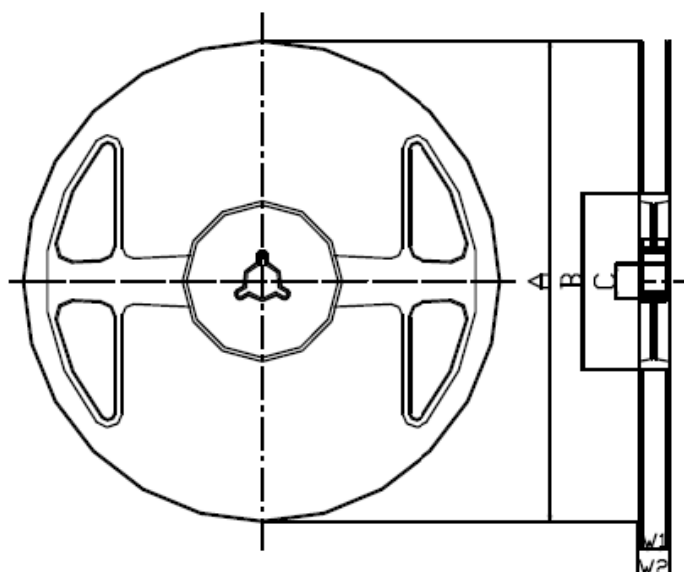


PACKING:**REEL DIMENSION**

Reel Count:

7" = 3000

13" = 10,000

**Materials of Reel**

Material : Polystyrene + Carbon

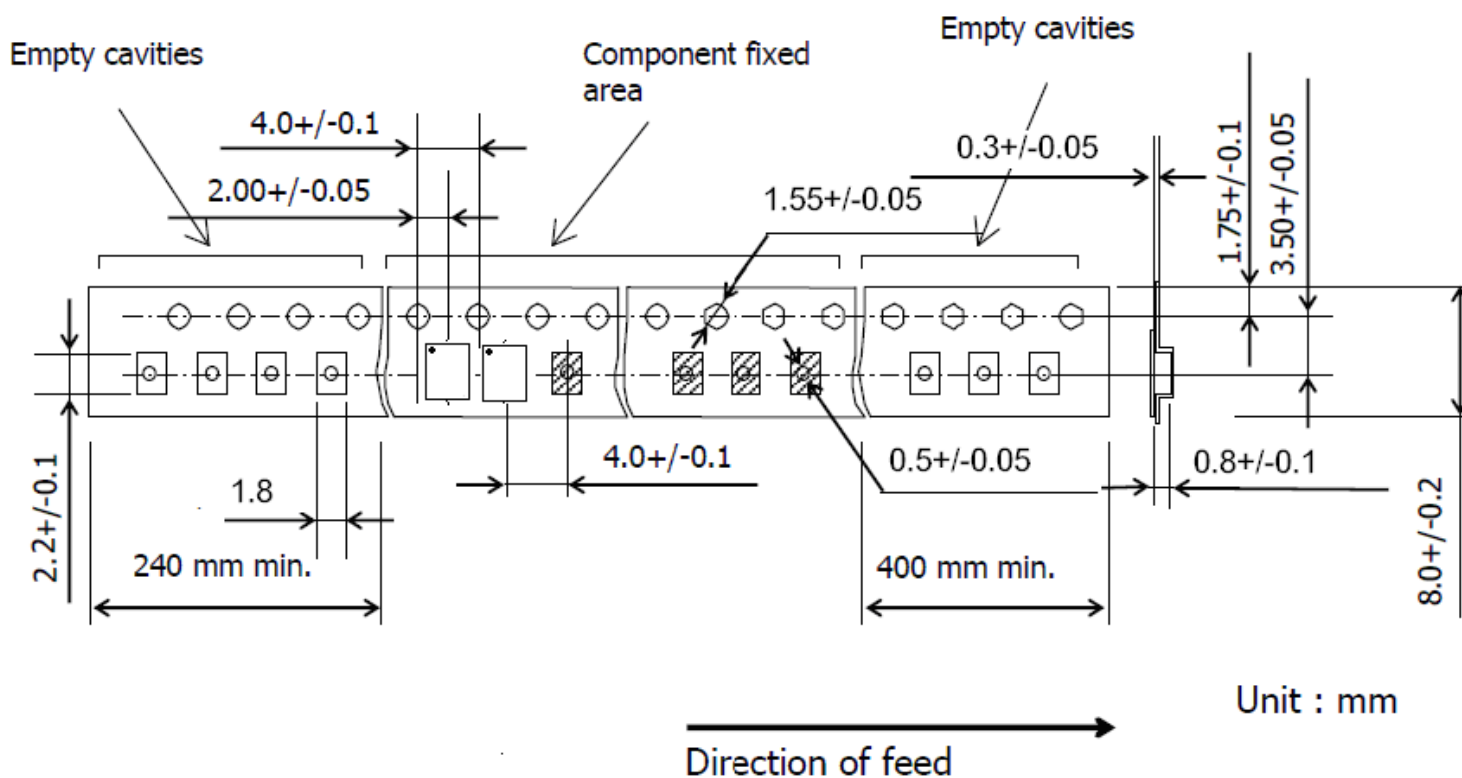
Characteristics : Conforms to EIAJ-ET-7200A

Color : Black

Surface resistance (reference value) : $10^9 \Omega/\text{sq}$ Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
Z	3,000 pcs	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

TAPE DIMENSION

Unit : mm

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.

