



SM1109-5

MAXIMUM RATING:

- Input Power Level: 10 dBm (in passband)
- DC Voltage : +/-5 V
- Operating Temperature: -30 °C to +85 °C
- Storage Temperature: -40 °C to +100 °C
- Moisture Sensitive Level: Level 1 (MSL1)
- ESD: 50 V(MM), 100 V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating source impedance: $Z_s = 50//7.5nH \Omega$

Terminating load impedance: $Z_L = 50//6.8nH \Omega$

Item	Unit	Min.	Typ.	Max.	Remark	
Center Frequency	Fc	MHz	-	1747.5	-	
Insertion Loss (1710~1785 MHz)	IL	dB(*1)	-	2.1	2.4	at 25 °C
		dB(*1)	-	-	3.0	-
Amplitude Ripple (1710~1785 MHz)		dB	-	1.0	1.5	at 25 °C
		dB	-	-	2.0	-
VSWR (1710~1785 MHz)		-	-	1.8	2.2	-
Attenuation (Reference level from 0 dB)						
DC ~ 1570 MHz		dB	25	36	-	-
1570 ~ 1580 MHz		dB	35	41	-	-
1805 ~ 1880 MHz		dB	15	22	-	at 25 °C
		dB	10	-	-	-
1930 ~ 2400 MHz		dB	25	34	-	-
2400 ~ 3000 MHz		dB	15	32	-	-
3000 ~ 4000 MHz		dB	10	27	-	-
4000 ~ 6000 MHz		dB	5	21	-	-

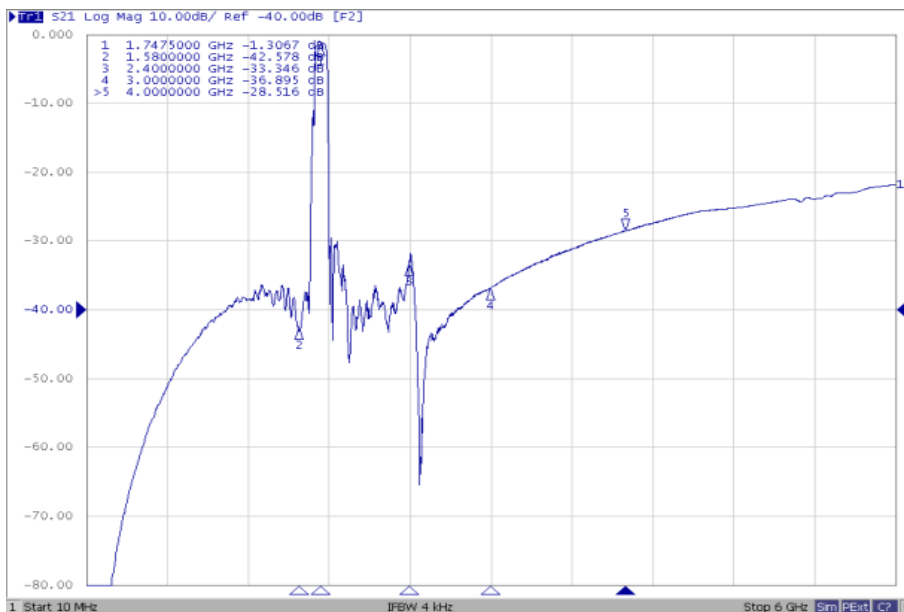
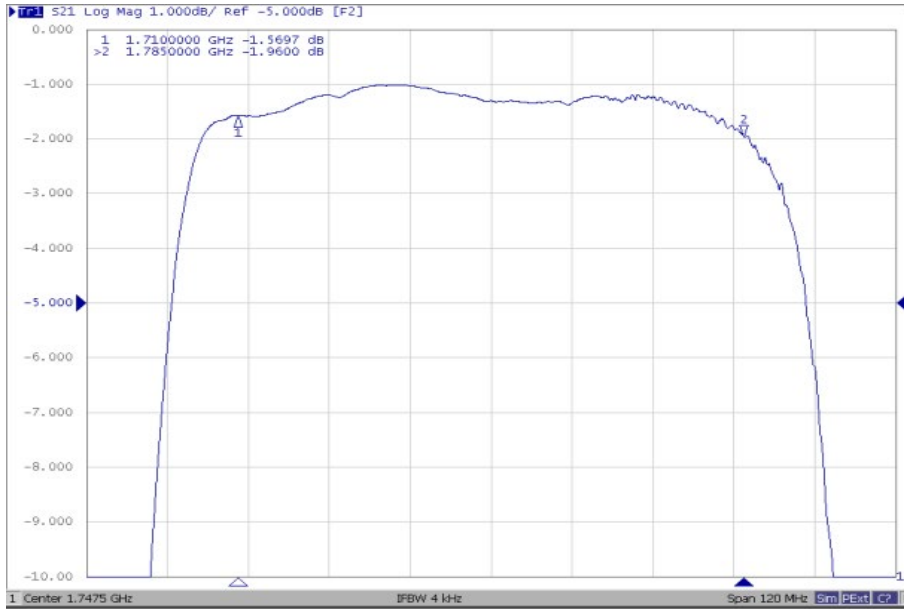
(*1) Specification of insertion loss includes loss that comes from test board. (Approximately 0.15 dB)



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

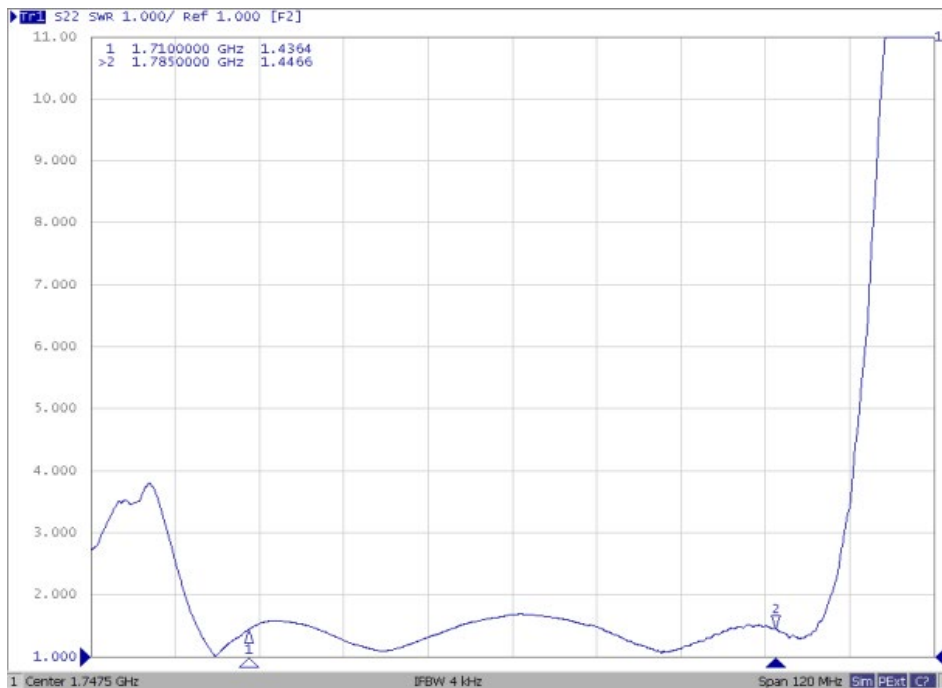
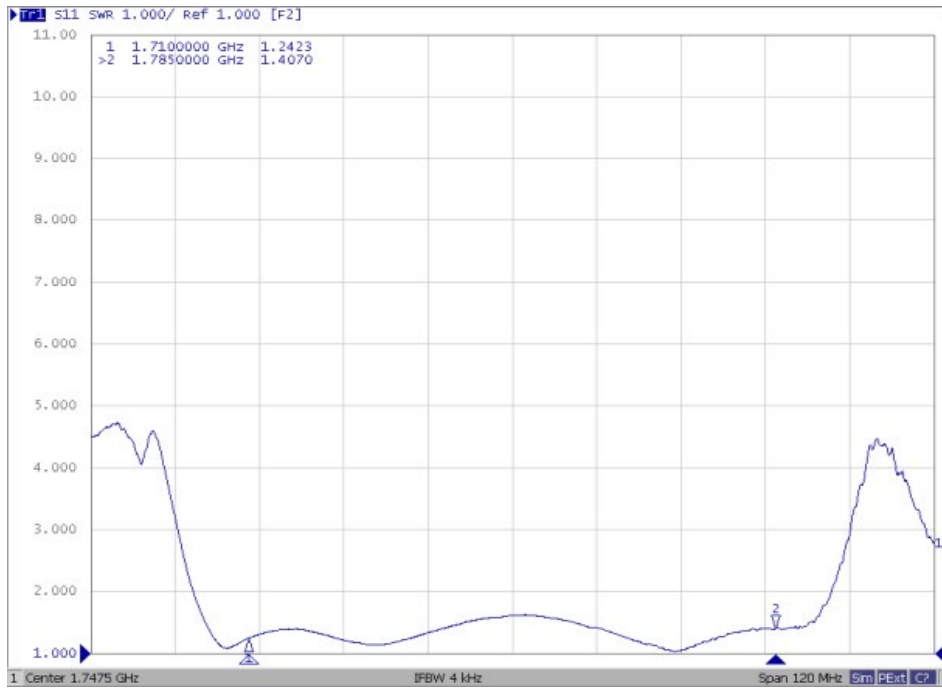
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARACTERISTICS:

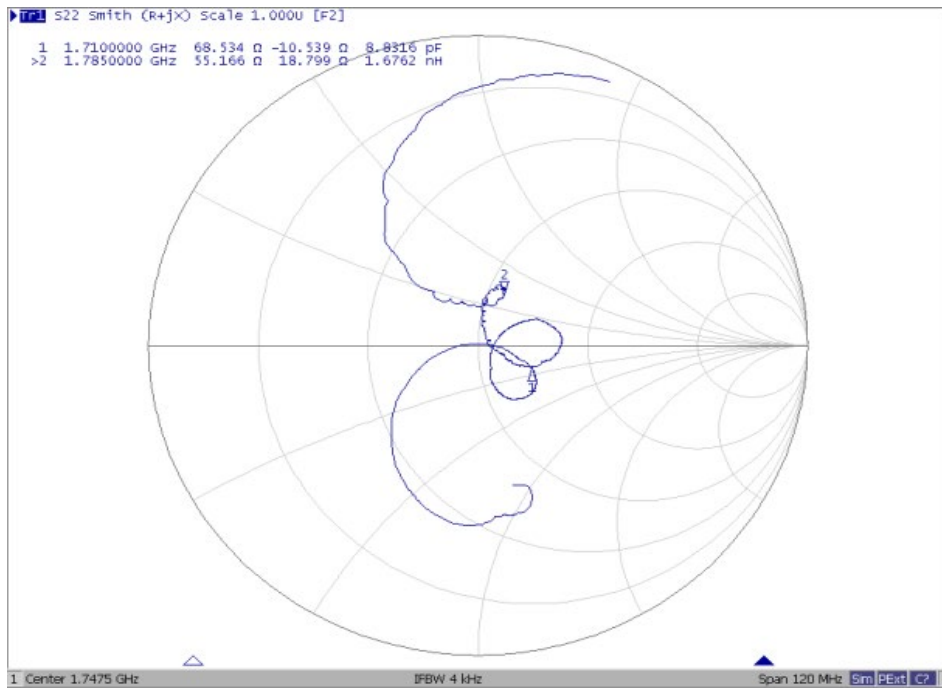
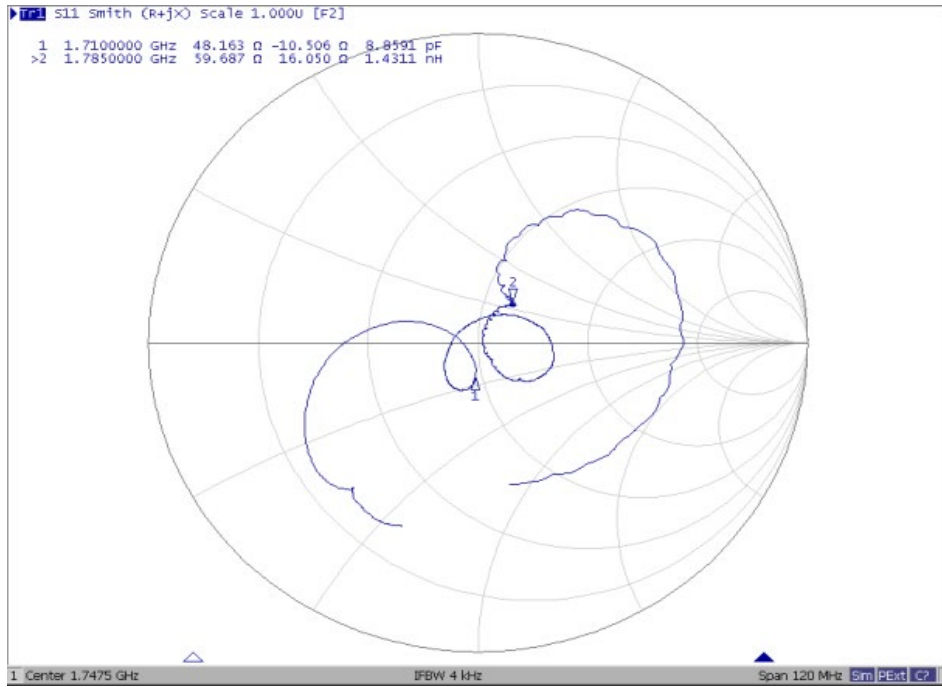


Reflection Functions:

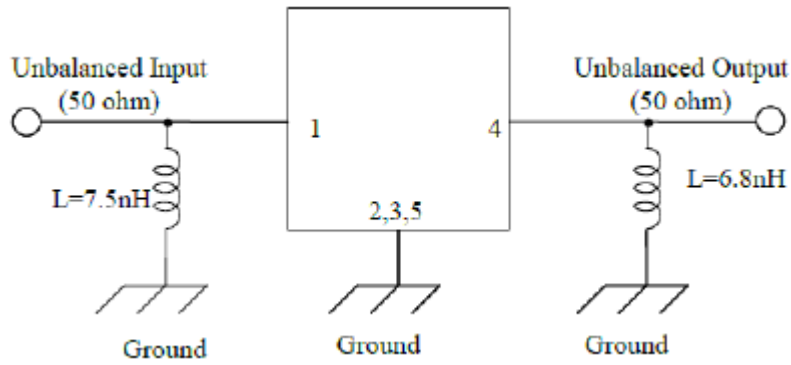
VSWR



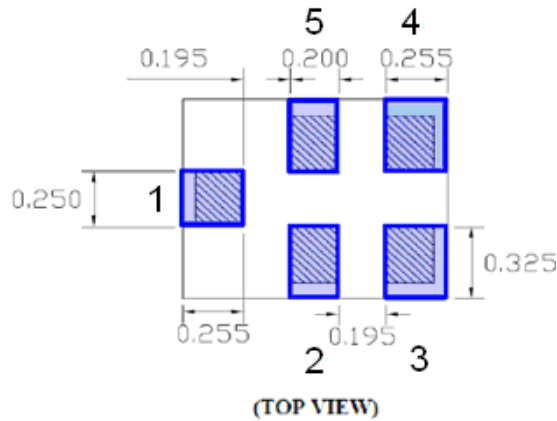
Smith Chart



MEASUREMENT CIRCUIT:

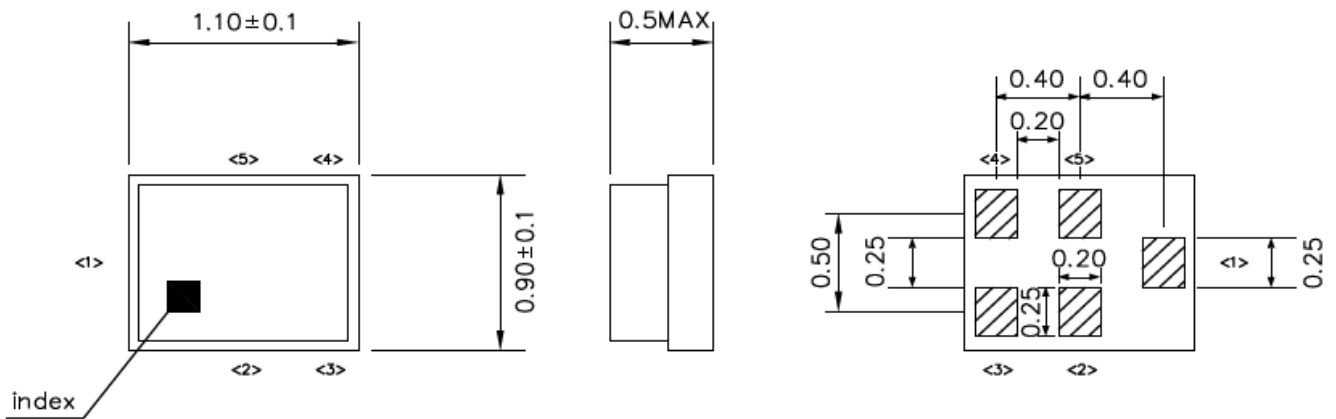


PCB Footprint:



OUTLINE DRAWING:

Device size: 1.1typ. x 0.9typ. x 0.5max.

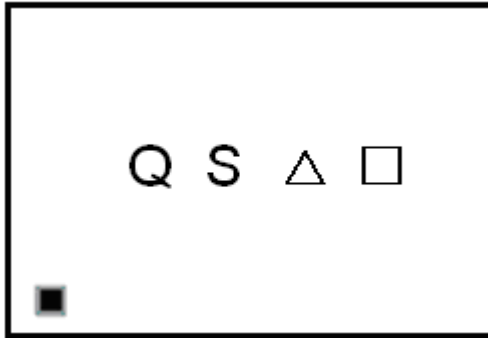


Unit : mm

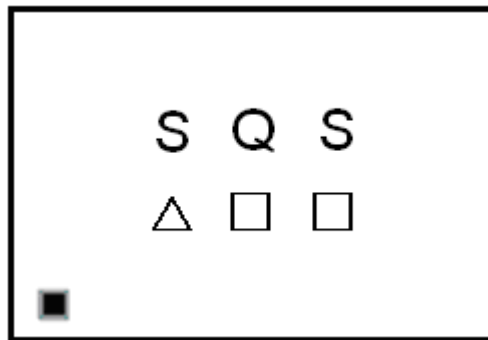
Pin Configuration

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

Top View (Sample Production):



Top View (Mass Production):



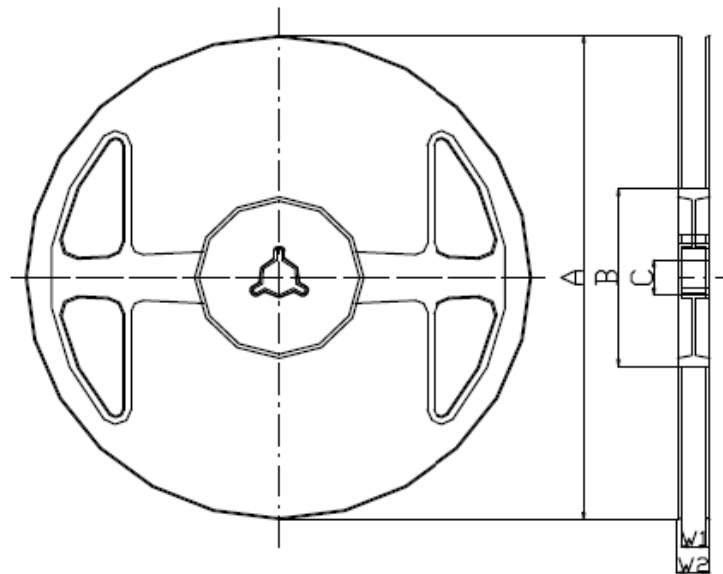
△ : Date Code

□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

PACKING:

1. REEL DIMENSION

Reel Count: 7" = 5000



Materials of Reel

Material : Polystyrene + Carbon

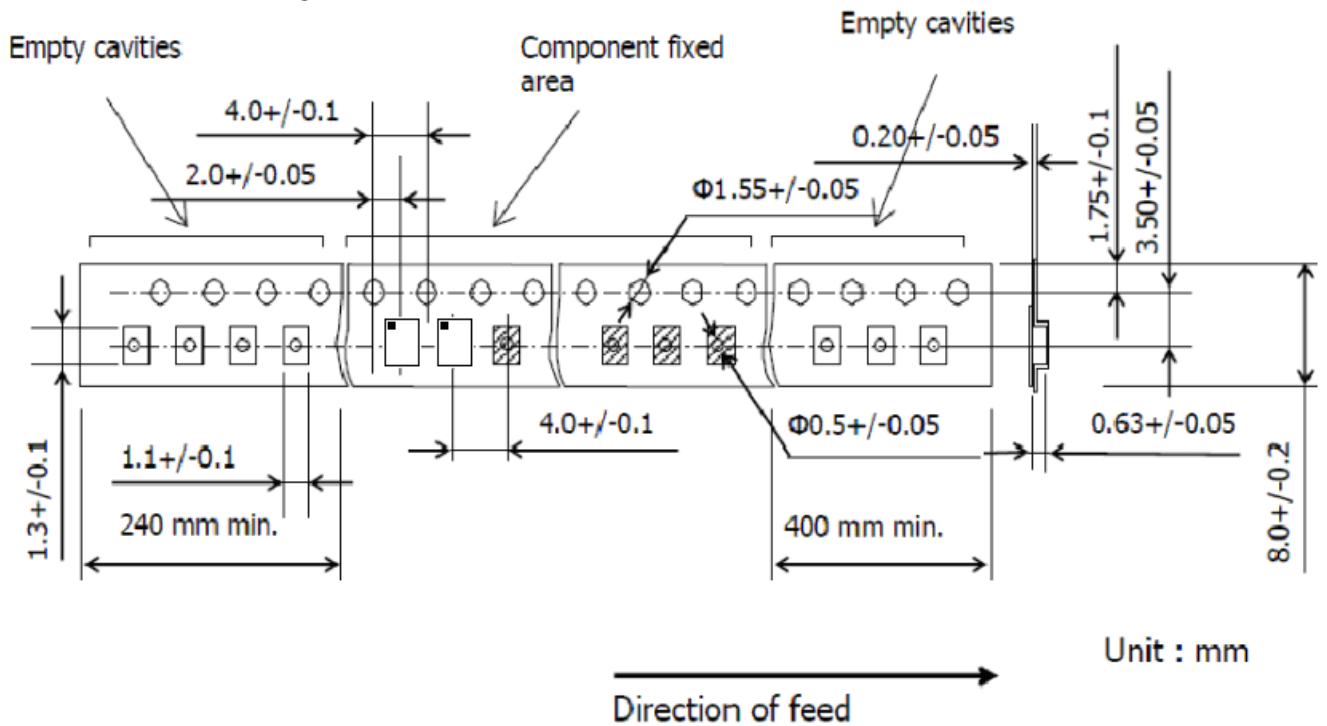
Color : Black

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

Unit : mm

A	B	C	W1	W2
$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

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

