

SM1109

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: 100 V(MM), 200 V(HBM)

ELECTRICAL CHARACTERISTICS

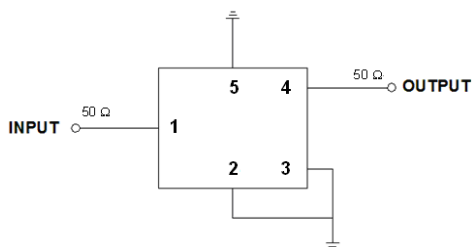
Terminating source impedance: $Z_s = 50 \Omega$

Terminating load impedance: $Z_L = 50 \Omega$

Parameters Description	Unit	Min.	Typ.	Max.
Center Frequency Fc	MHz	-	710	-
Insertion Loss (704~716 MHz) IL	dB(*1)	-	1.3	1.8
Amplitude Ripple (704~716 MHz)	dB	-	0.4	1.0
VSWR (704~716 MHz)	-	-	1.5	2.0
Attenuation (Reference level from 0 dB)				
DC ~ 674 MHz	dB	45	55	-
674 ~ 686 MHz	dB	35	47	-
734 ~ 746 MHz	dB	28	33	-
869 ~ 1800 MHz	dB	35	45	-
1800 ~ 3000 MHz	dB	25	40	-
3000 ~ 4000 MHz	dB	20	38	-
4000 ~ 5000 MHz	dB	20	37	-
5000 ~ 6000 MHz	dB	20	37	-

(*1) Specification of insertion loss includes loss that comes from the test board. (0.05 dB)

MEASUREMENT CIRCUIT

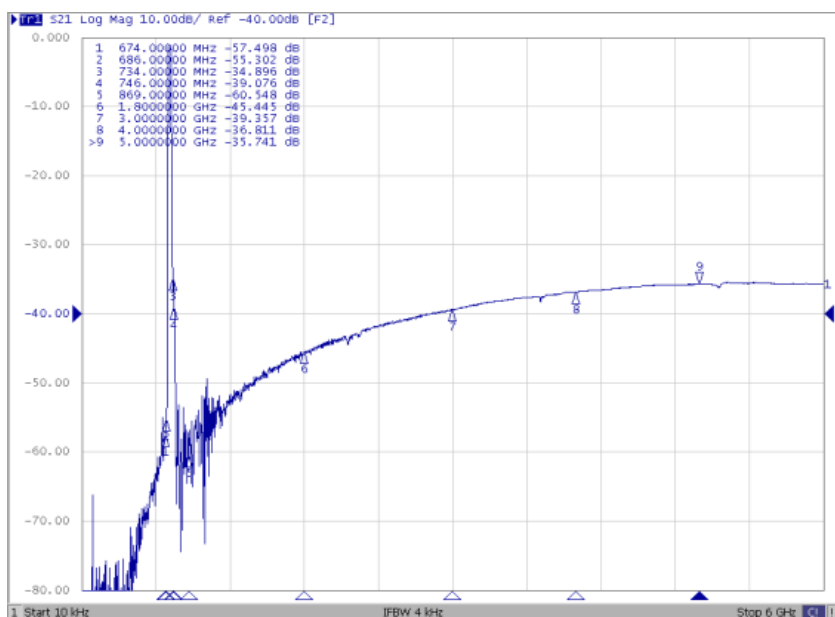
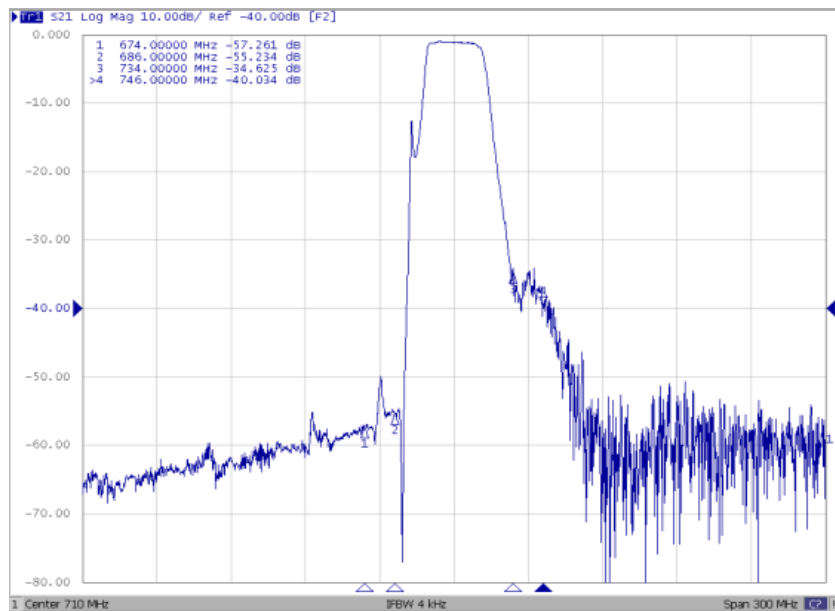
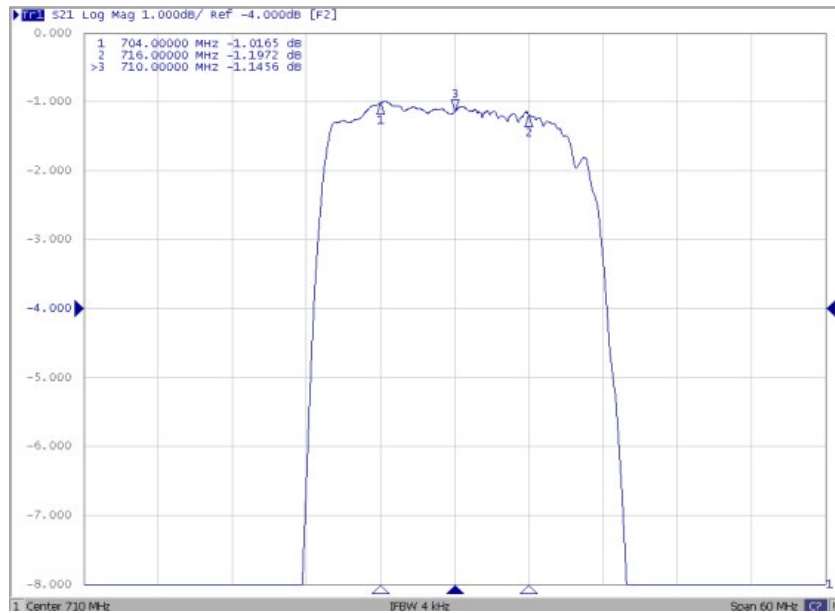


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

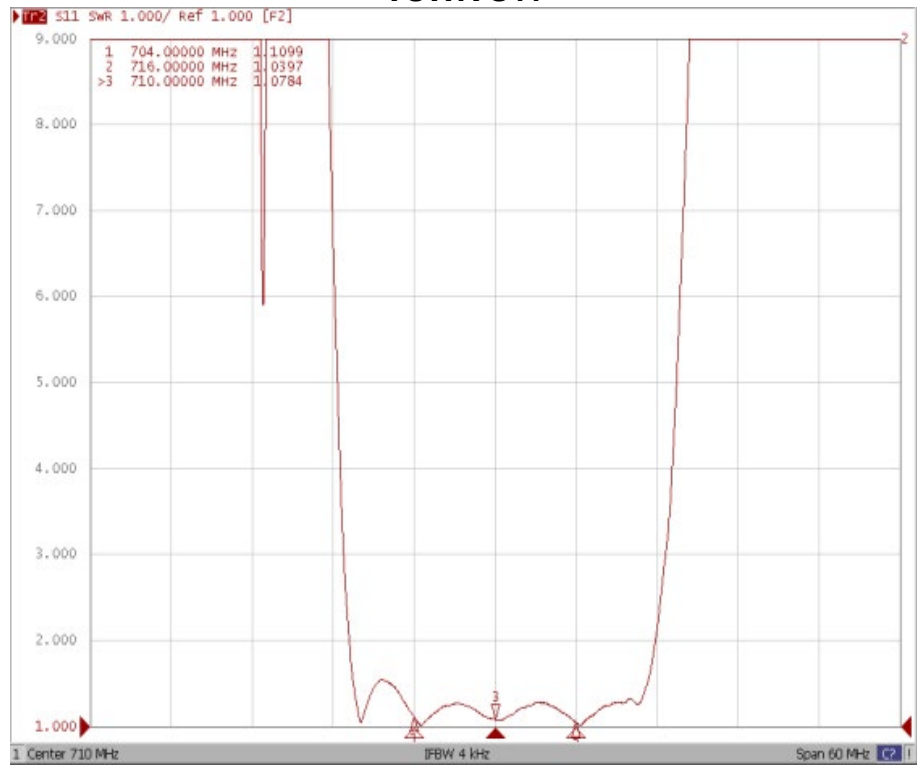
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARATERISTIC

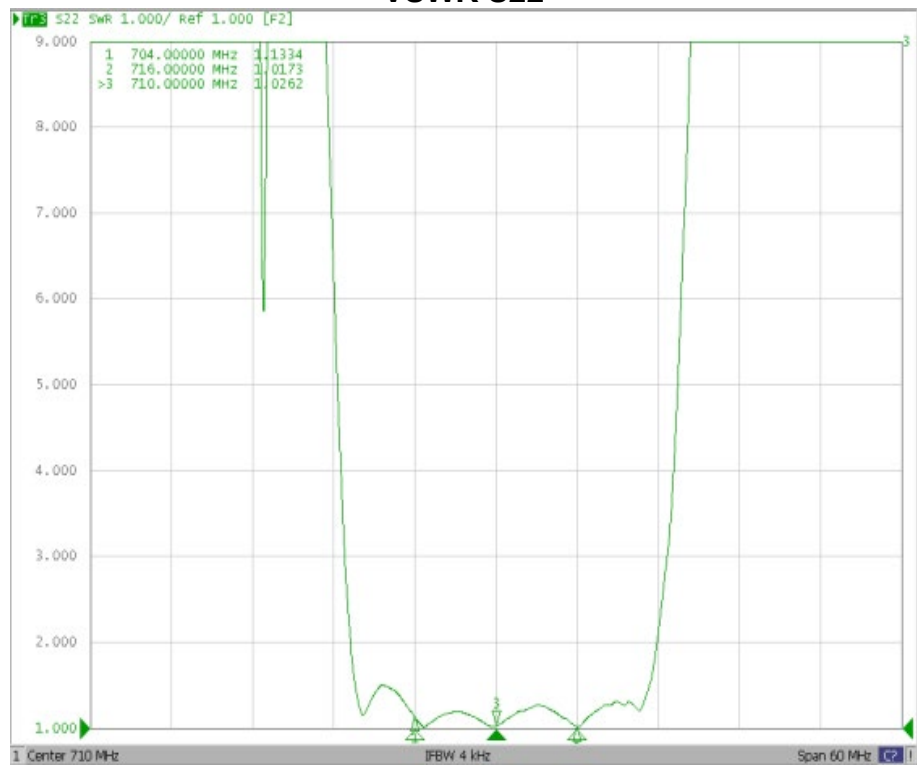


Reflection Functions:

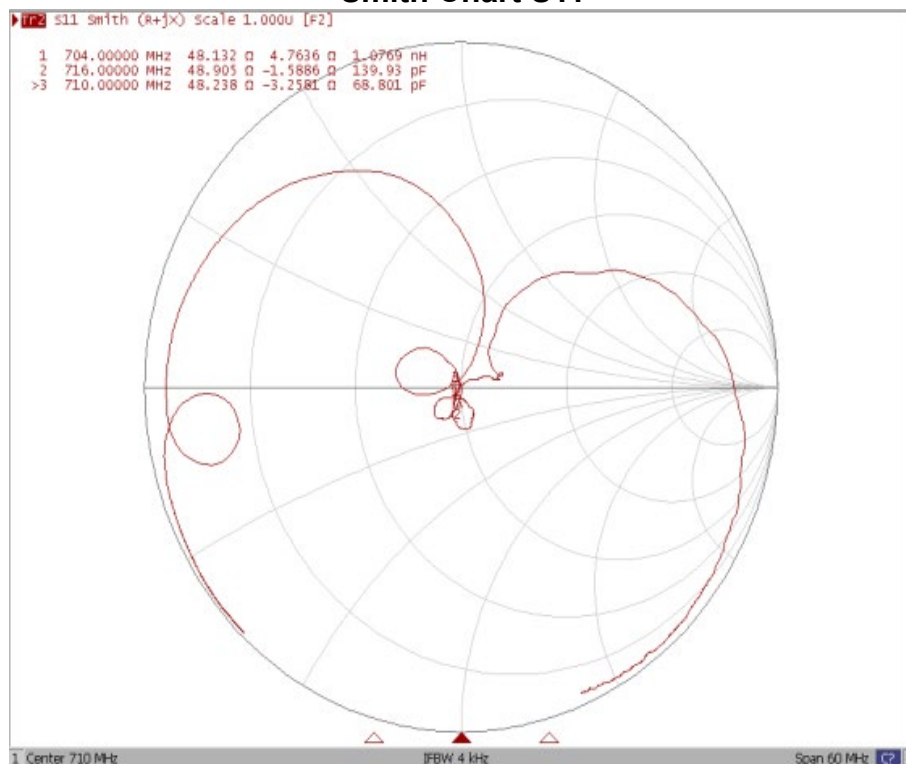
VSWR S11



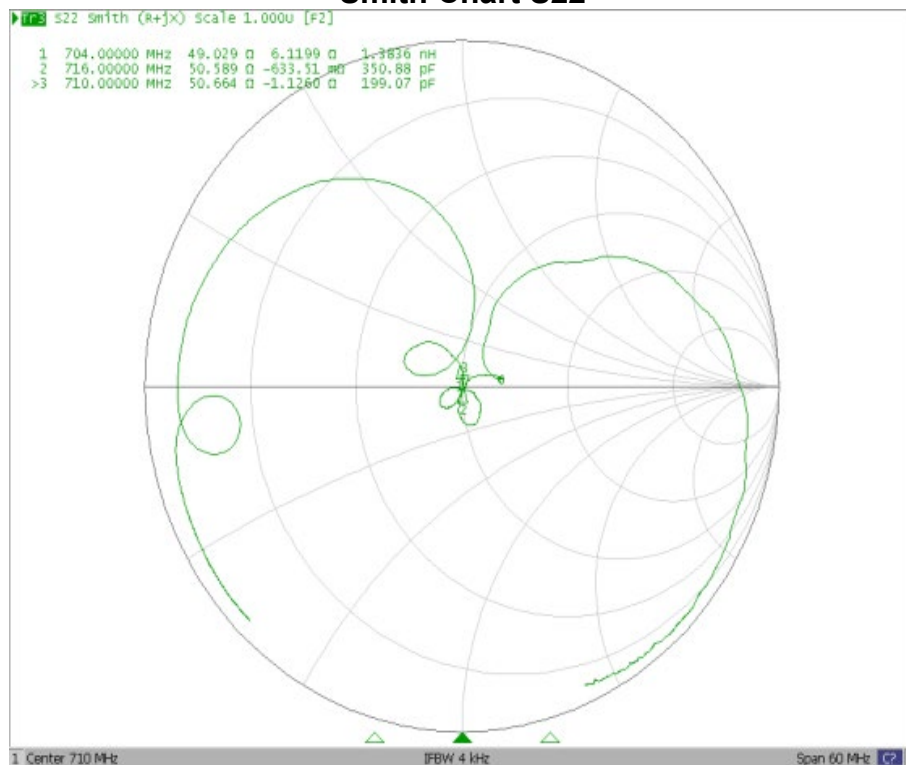
VSWR S22



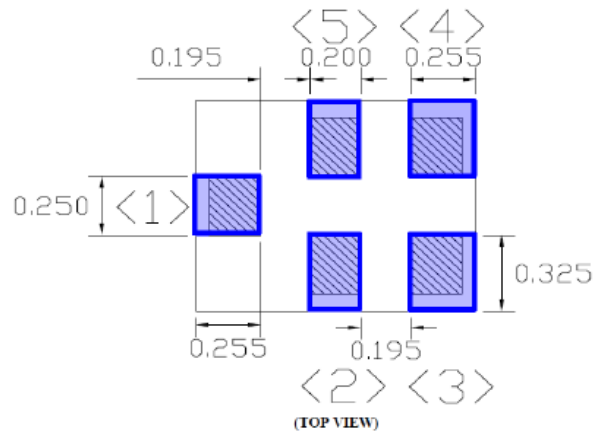
Smith Chart S11



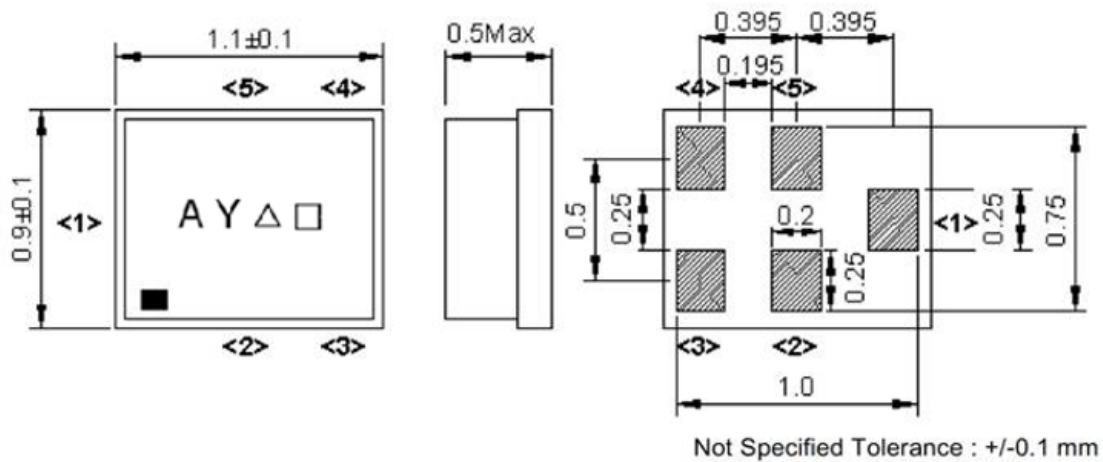
Smith Chart S22



PCB Footprint



OUTLINE DRAWING (Mass Production):



Pin Configuration

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

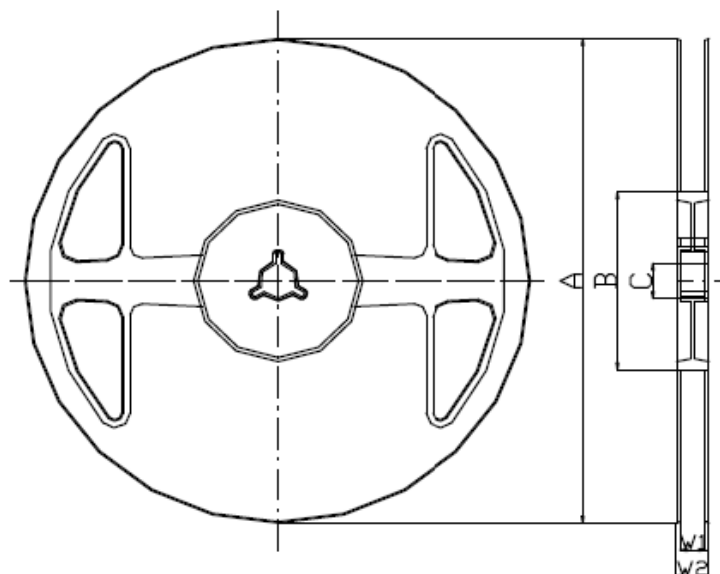
△ : Date Code

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

Date Code												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
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

PACKING:
REEL DIMENSION

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



Materials of Reel

Material : Polystyrene + Carbon

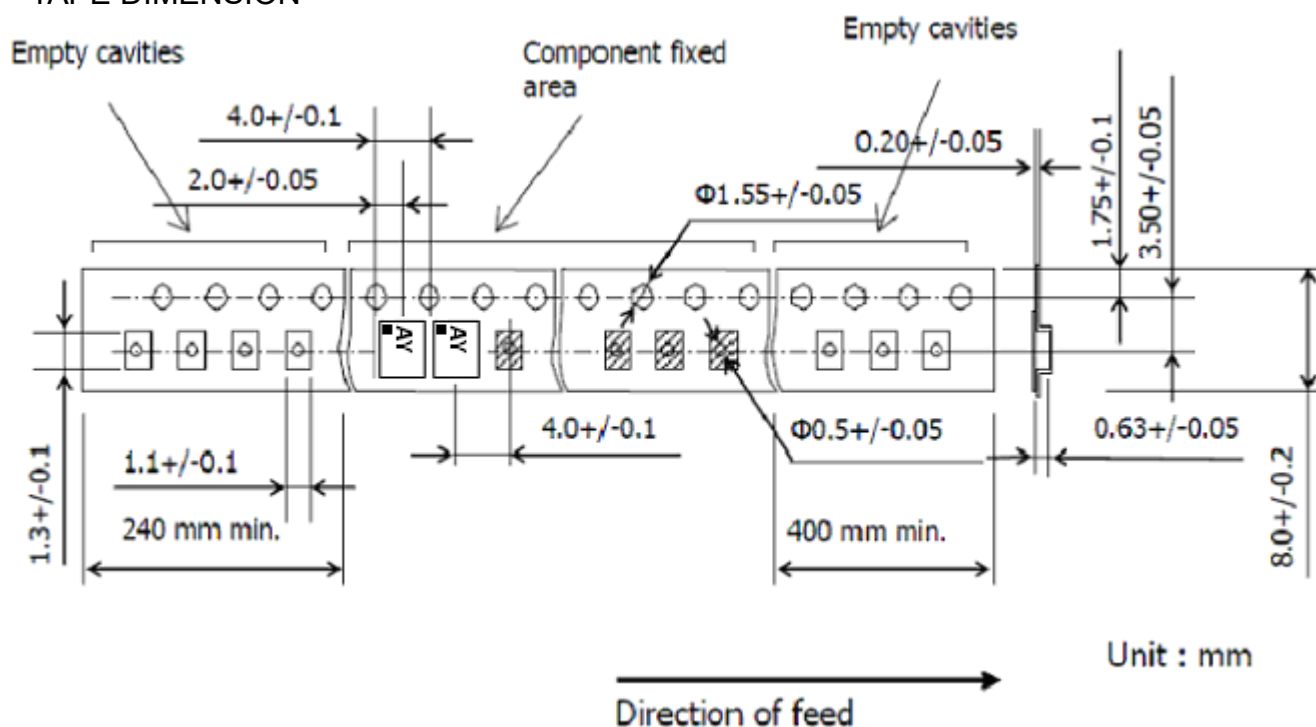
Color : Black

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

Unit : mm

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

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

