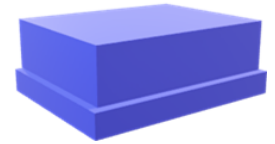


**SF2554LA**

**707.5 MHz  
SAW Filter**



SM1109

**MAXIMUM RATING**

- Input Power Level: 10 dBm
- DC Voltage : +/-5 V
- Operating Temperature: -40 °C to +85 °C
- Storage Temperature: -40 °C to +85 °C
- Moisture Sensitive Level: Level 1 (MSL1)
- ESD: 100 V(MM), 200V(HBM)
- AEC-Q200 Qualified

**ELECTRICAL CHARACTERISTICS**

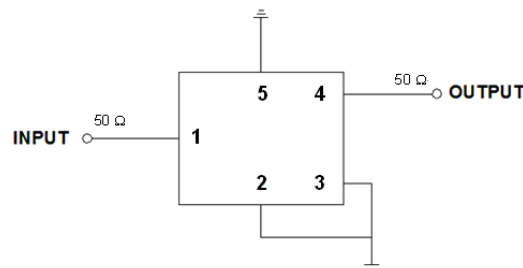
Terminating source impedance:  $Z_s=50 \Omega$

Terminating load impedance:  $Z_L=50 \Omega$

Parameters Description	Unit	Min.	Typ.	Max.
<b>Center Frequency</b> <span style="float:right">Fc</span>	MHz	-	707.5	-
<b>Insertion Loss</b> (699~716 MHz) <span style="float:right">IL</span>	dB(*1)	-	1.6	2.5
<b>Amplitude Ripple</b> (699~716 MHz)	dB	-	0.6	1.7
<b>VSWR</b> (699~716 MHz)	-	-	1.7	2.1
<b>Attenuation</b> (Reference level from 0 dB)				
1 ~ 692 MHz	dB	18	37	-
729 ~ 746 MHz	dB	13	23	-
1386 ~ 1442 MHz	dB	40	47	-
1574.42 ~ 1576.42 MHz	dB	38	46	-
2084 ~ 2158 MHz	dB	30	42	-
2782 ~ 2874 MHz	dB	25	39	-

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

**MEASUREMENT CIRCUIT**

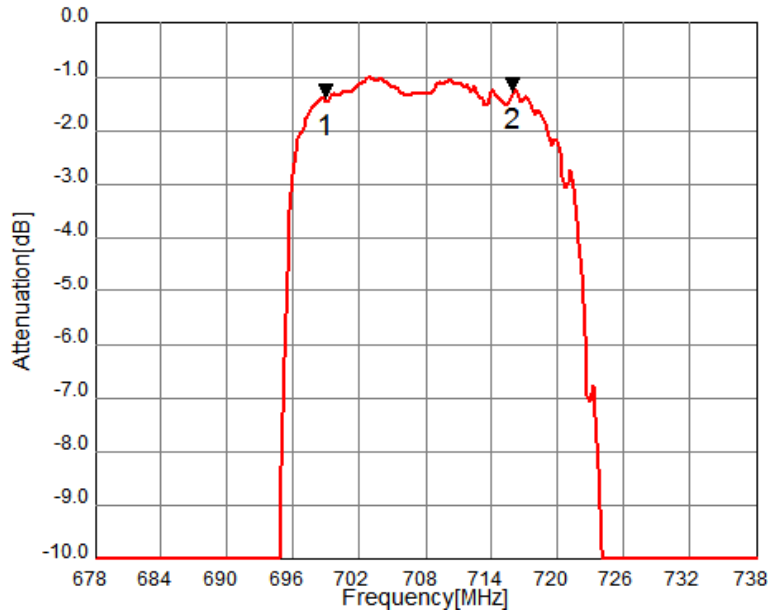


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

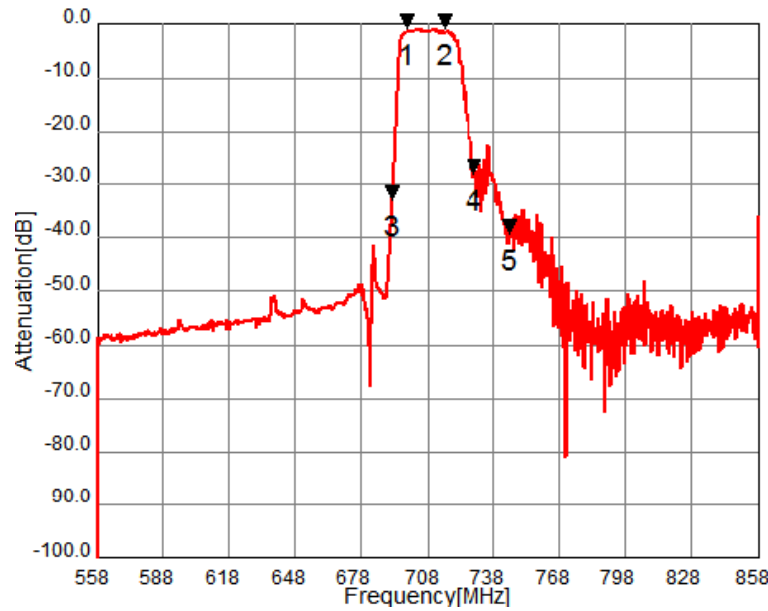
**NOTES:**

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.

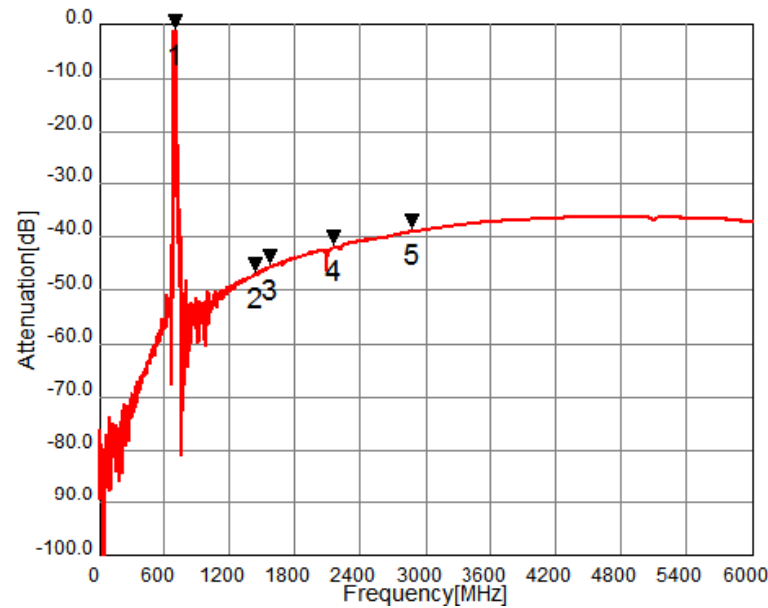
# FREQUENCY CHARATERISTIC



Mk1: 699.0MHz  
S21=-1.475dB  
Mk2: 716.0MHz  
S21=-1.330dB

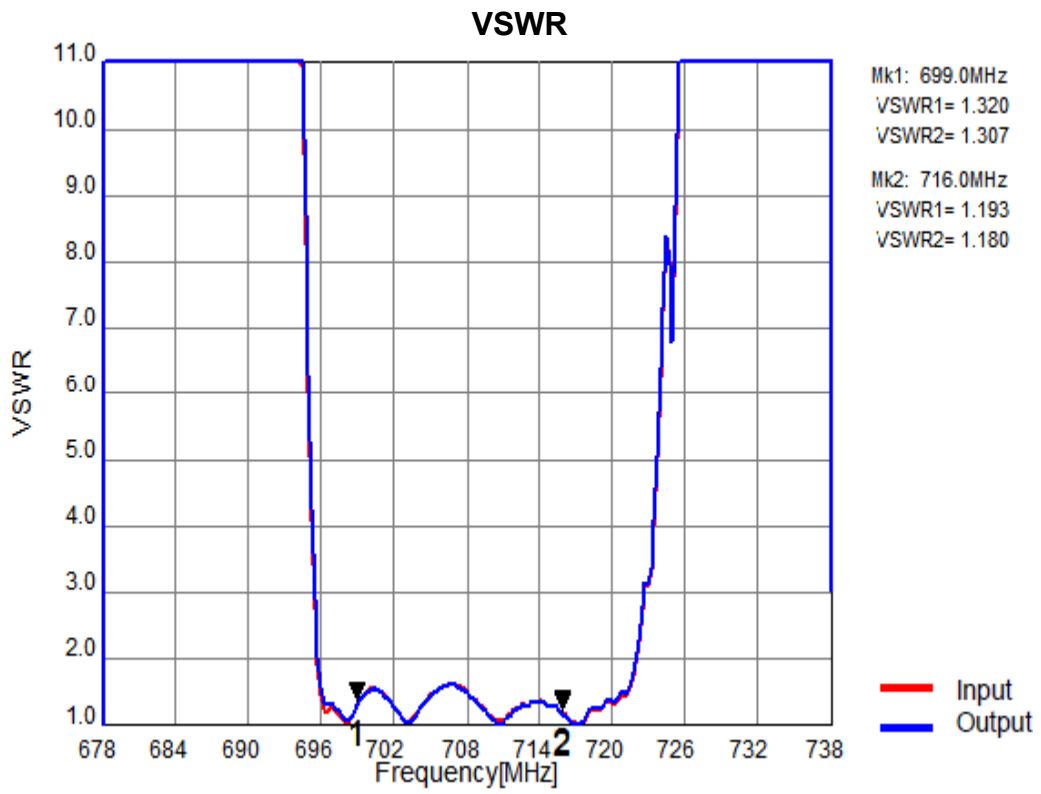


Mk1: 699.0MHz  
S21=-1.475dB  
Mk2: 716.0MHz  
S21=-1.330dB  
Mk3: 692.0MHz  
S21=-33.550dB  
Mk4: 729.0MHz  
S21=-28.894dB  
Mk5: 746.0MHz  
S21=-39.887dB

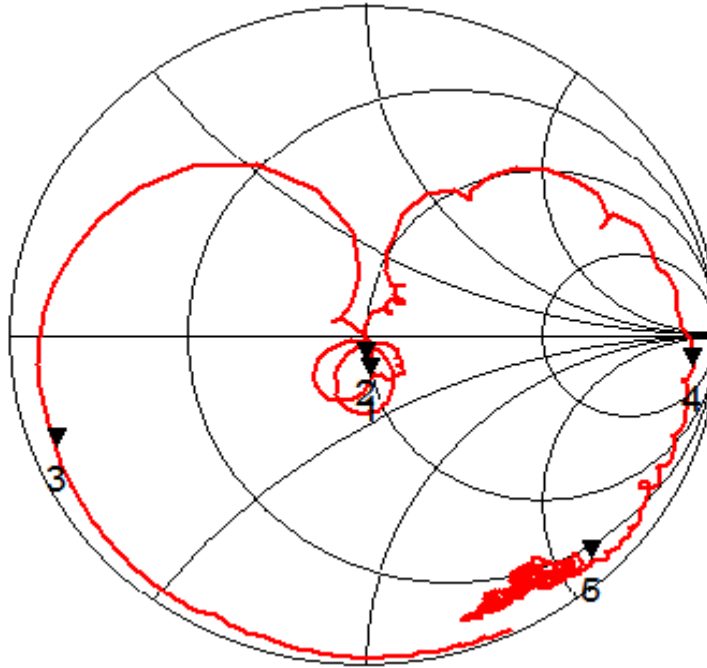


Mk1: 707.5MHz  
S21=-1.309dB  
Mk2: 1442.0MHz  
S21=-47.088dB  
Mk3: 1576.4MHz  
S21=-45.602dB  
Mk4: 2158.0MHz  
S21=-42.057dB  
Mk5: 2874.0MHz  
S21=-39.039dB

### Reflection Functions:

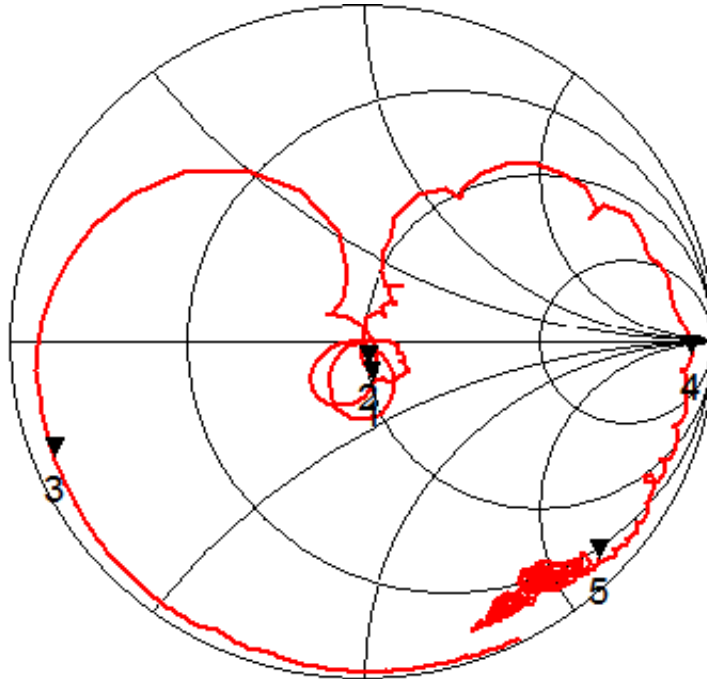


### Smith Chart S11



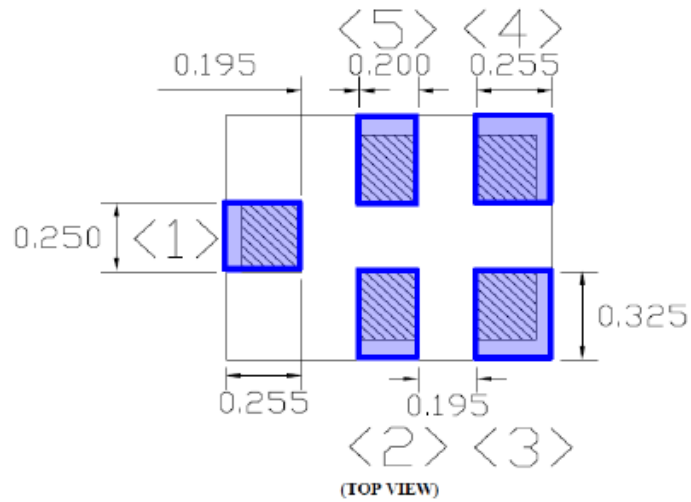
Mk1: 699.0  
S11= 0.992 - j 0.277  
Mk2: 716.0  
S11= 0.994 - j 0.176  
Mk3: 692.0  
S11= 0.032 - j 0.192  
Mk4: 729.0  
S11= 7.854 - j 12.656  
Mk5: 746.0  
S11= 0.210 - j 2.297

### Smith Chart S22

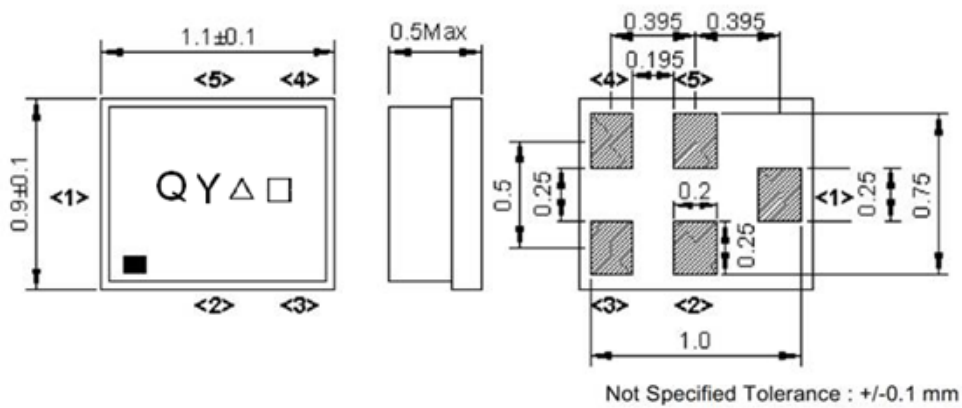


Mk1: 699.0  
S22= 1.021 - j 0.271  
Mk2: 716.0  
S22= 1.013 - j 0.166  
Mk3: 692.0  
S22= 0.030 - j 0.194  
Mk4: 729.0  
S22= 16.958 - j 13.899  
Mk5: 746.0  
S22= 0.235 - j 2.438

## PCB Footprint



## OUTLINE DRAWING



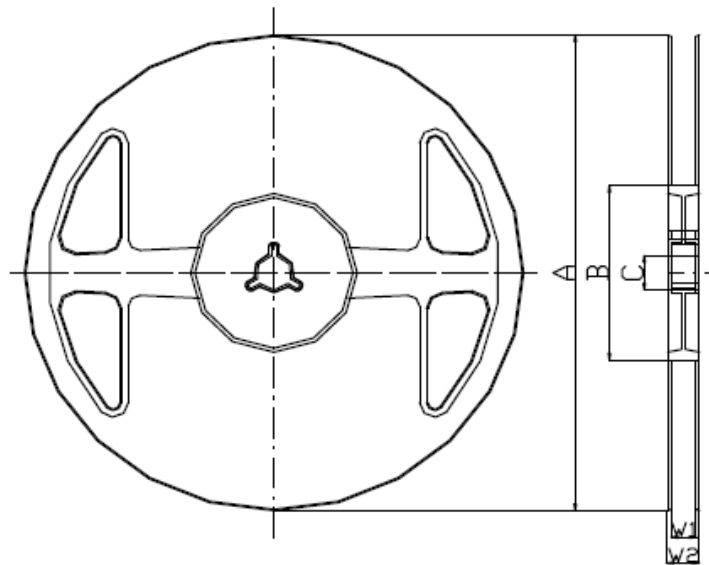
Date Code												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	A	N	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

## Pin Configuration

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

# PACKING

## REEL DIMENSION



### Materials of Reel

Material : Polystyrene + Carbon

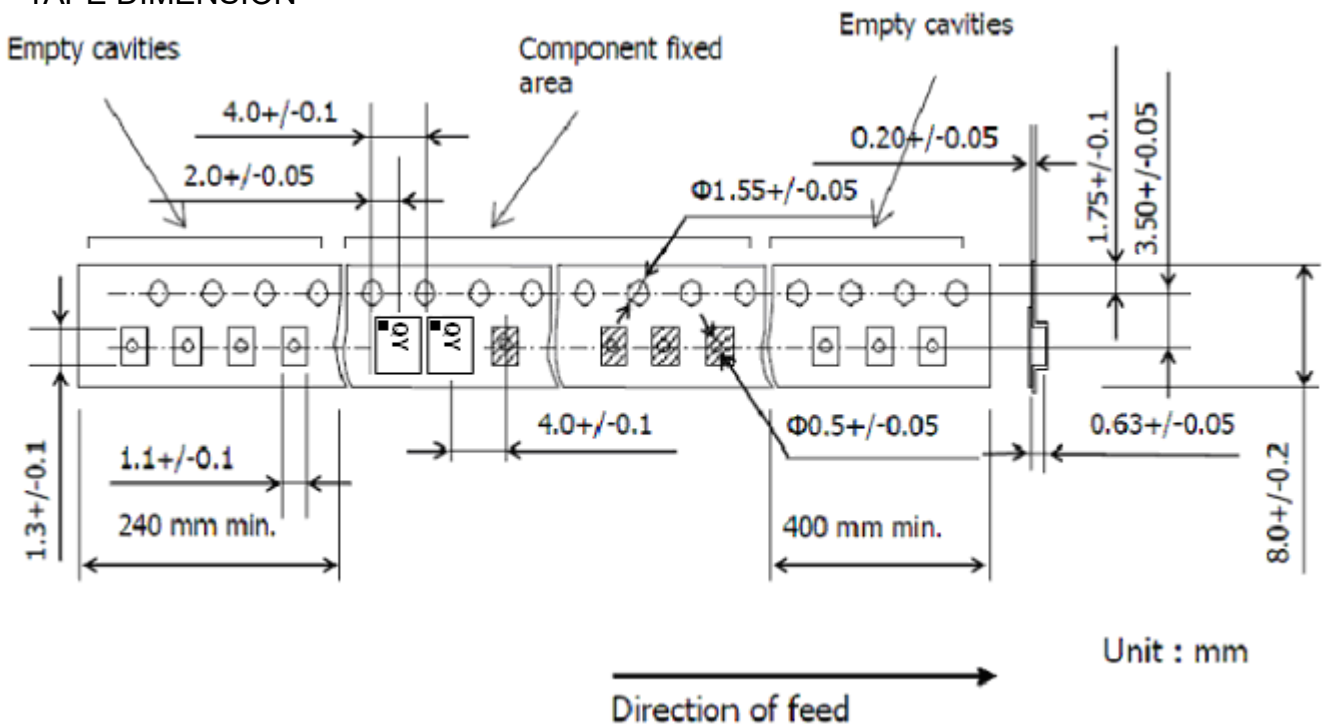
Color : Black

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

Unit : mm

Code	Quantity	A	B	C	W1	W2
J	5,000 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 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

