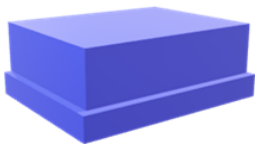
RFMi
BRAND OF AKOUSTIS

RoHS compliant

SF2541LM

1585.655 MHz SAW Filter



SM1109-5

Maximum Rating

- Maximum input power: +10dBm (In Passband)
- Maximum DC Voltage : +/-5 V (Device only)
- Operating temperature: -30°C to +85°C
- Device storage temperature: -40°C to +100°C
- Moisture Sensitive Level: Level 1

Electrical Characteristics

Terminating source impedance: Zs = 50 Ω (Single-ended)

Terminating load impedance: Z_L = 100//18nH Ω (Balanced)

Parameters Description		Unit	Minimum	Typical	Maximum
Insertion Loss	1574.42~1576.42 MHz	dB(*1)	-	1.5	1.9
	1565.42~1585.42 MHz	dB(*1)	-	1.6	2.0
	1597.5515~1605.8860 MHz	dB(*1)	-	1.7	2.1
VSWR(Input/Output)	1574.42~1576.42 MHz	-	-	1.4	2.0
	1565.42~1585.42 MHz	-	-	1.5	2.0
	1597.5515~1605.8860 MHz	-	-	1.6	2.0
Amplitude balance (($\|S21/S31\|$))	1574.42~1576.42 MHz	dB	-1.5	+0.5/+0.7	+1.5
	1565.42~1585.42 MHz	dB	-5	-0.2/+2.7	+5
	1597.5515~1605.8860 MHz	dB	-1.8	+1/-0.6	+1.8
Phase balance (($\Phi S21-\Phi S31)+180$)	1574.42~1576.42 MHz	deg	-10	+5/+7	+10
	1565.42~1585.42 MHz	deg	-10	-2/+7	+10
	1597.5515~1605.8860 MHz	deg	-15	-10/-8	+15
Attenuation:					
10~794 MHz		dB	45	50	-
794~925 MHz		dB	40	47	-
925~960 MHz		dB	40	46	-
1427~1463 MHz		dB	30	34	-
1710~1785 MHz		dB	35	42	-
1850~1910 MHz		dB	35	42	-
1920~1980 MHz		dB	34	39	-
2401~2483 MHz		dB	30	35	-
2500~2570 MHz		dB	30	34	-

(*1) Specification of insertion loss includes loss that comes from the test board. (0.1dB)

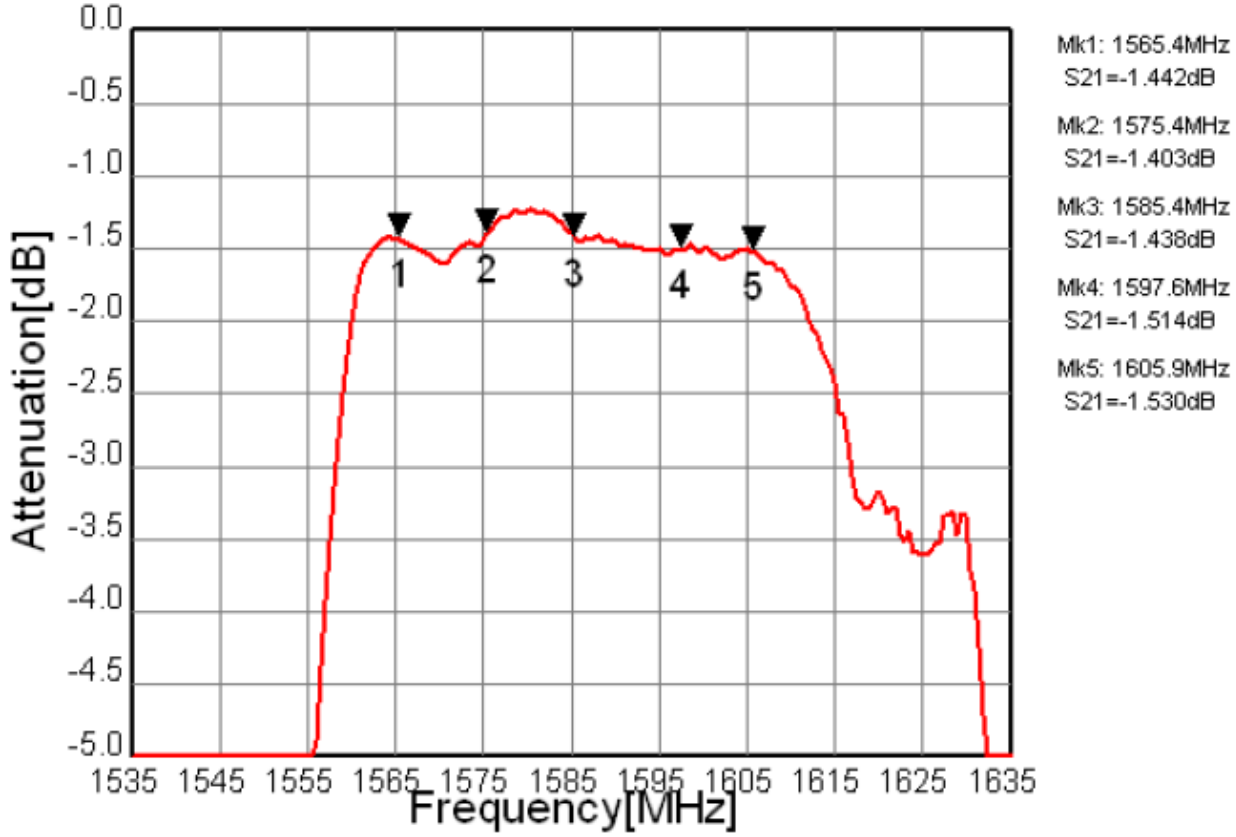
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

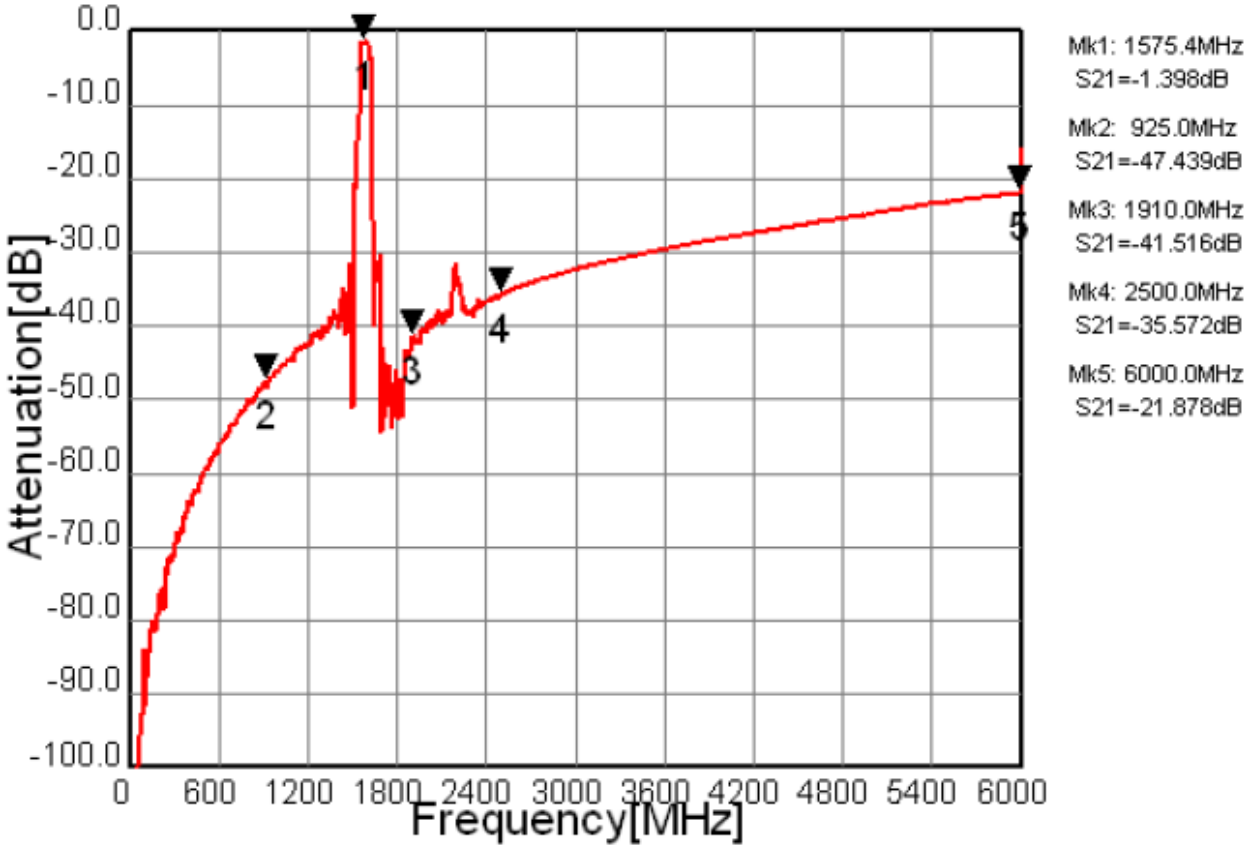
Frequency Characteristics

Pass-band

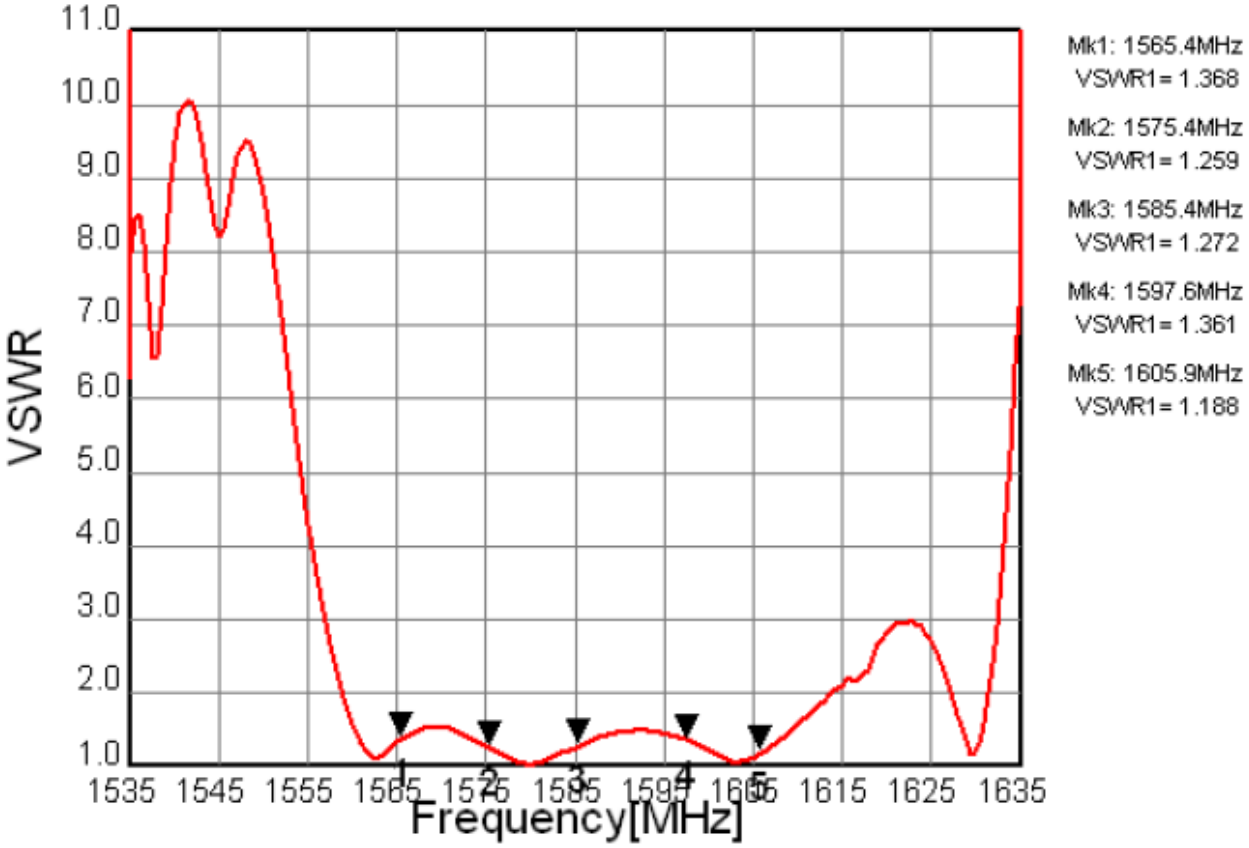
In-band



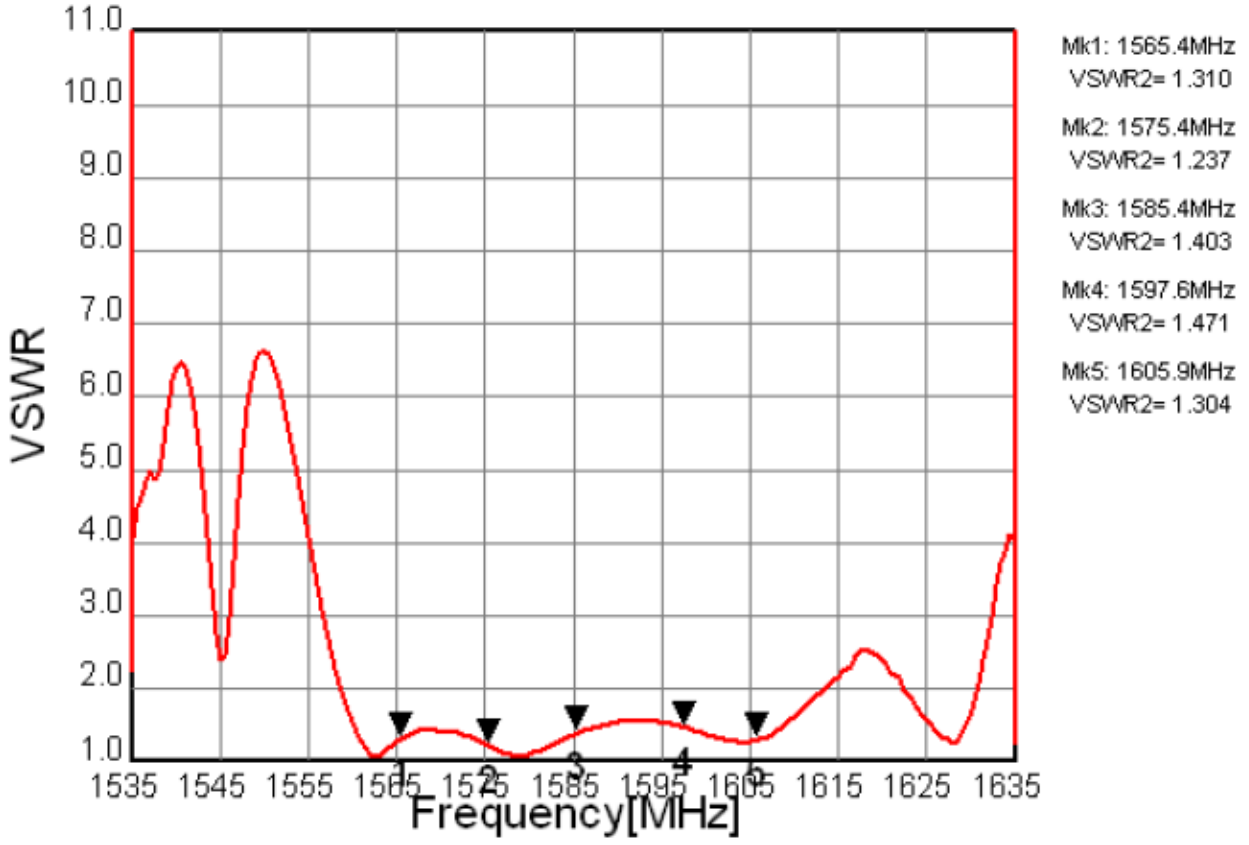
Wide-band


0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100.0
Attenuation[dB]
0
600
1200
1800
2400
3000
3600
4200
4800
5400
6000
Frequency[MHz]
1
2
3
4
5
Mk1: 1575.4MHz
S21=-1.398dB
Mk2: 925.0MHz
S21=-47.439dB
Mk3: 1910.0MHz
S21=-41.516dB
Mk4: 2500.0MHz
S21=-35.572dB
Mk5: 6000.0MHz
S21=-21.878dB

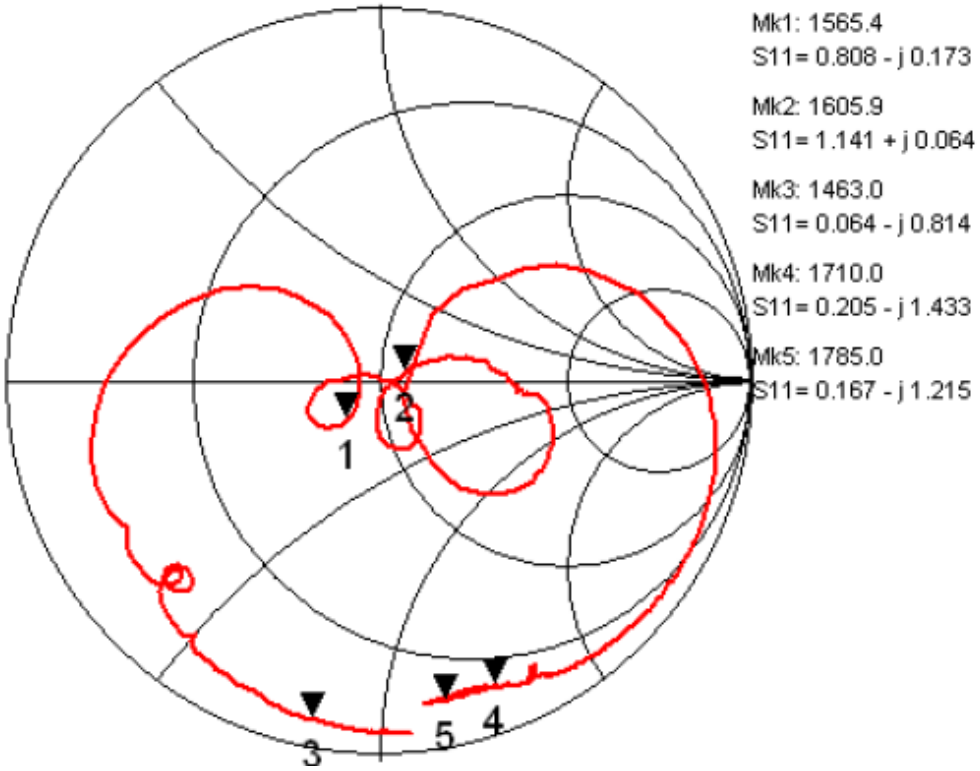
VSWR (Input)



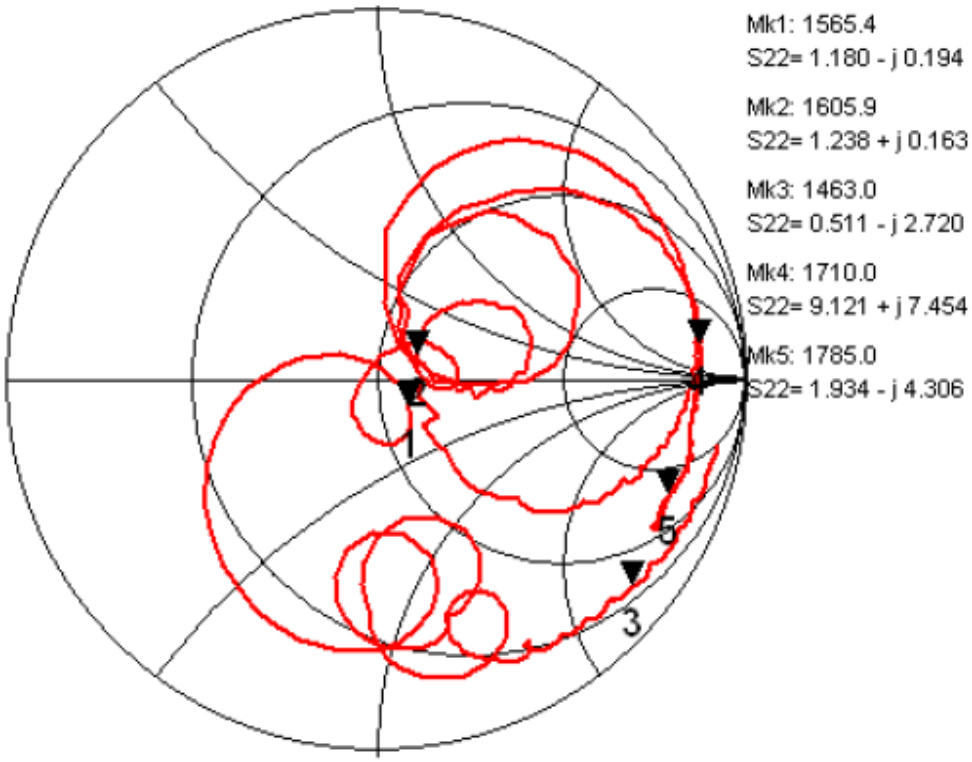
VSWR (Output)



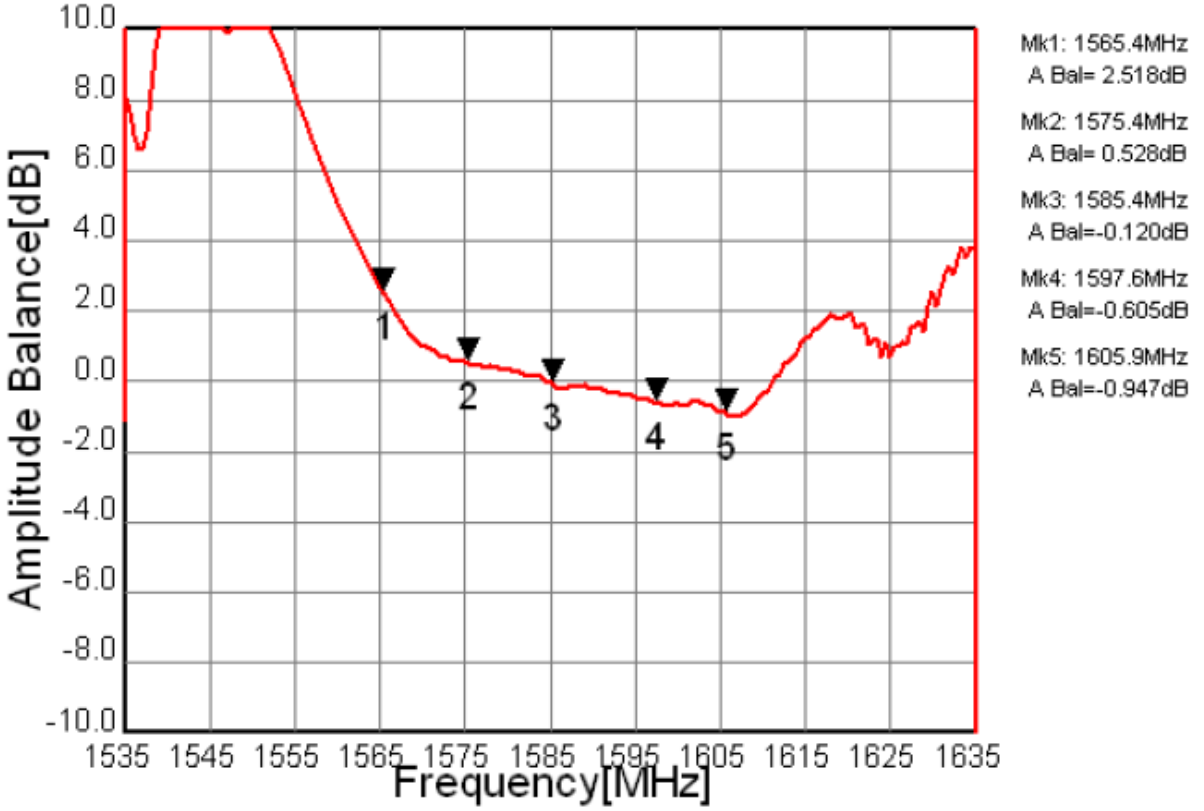
Input Impedance



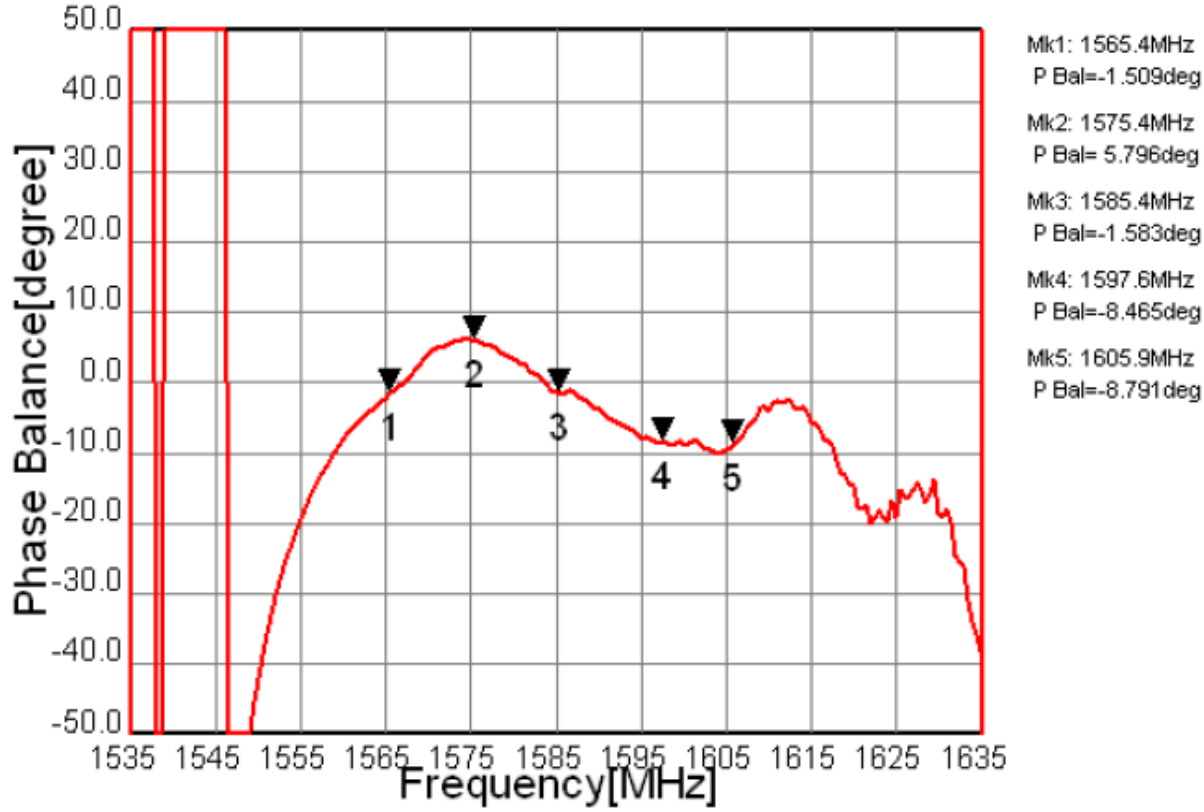
Output Impedance



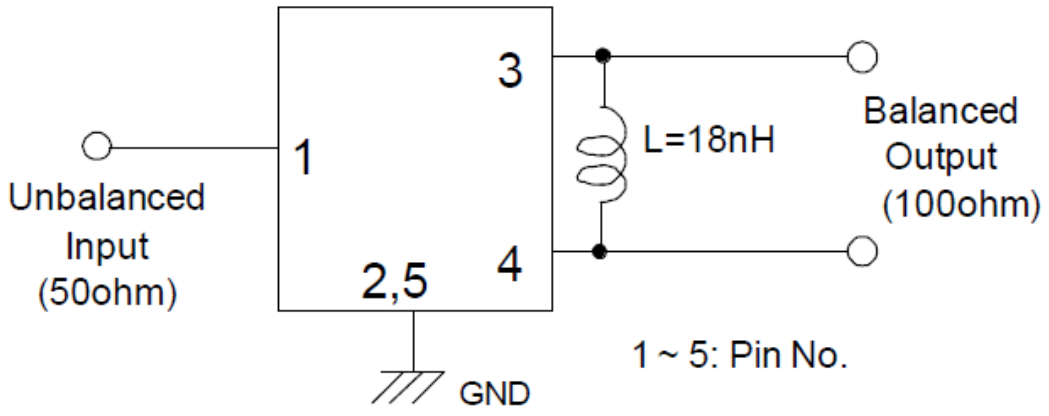
Amplitude balance



Phase balance

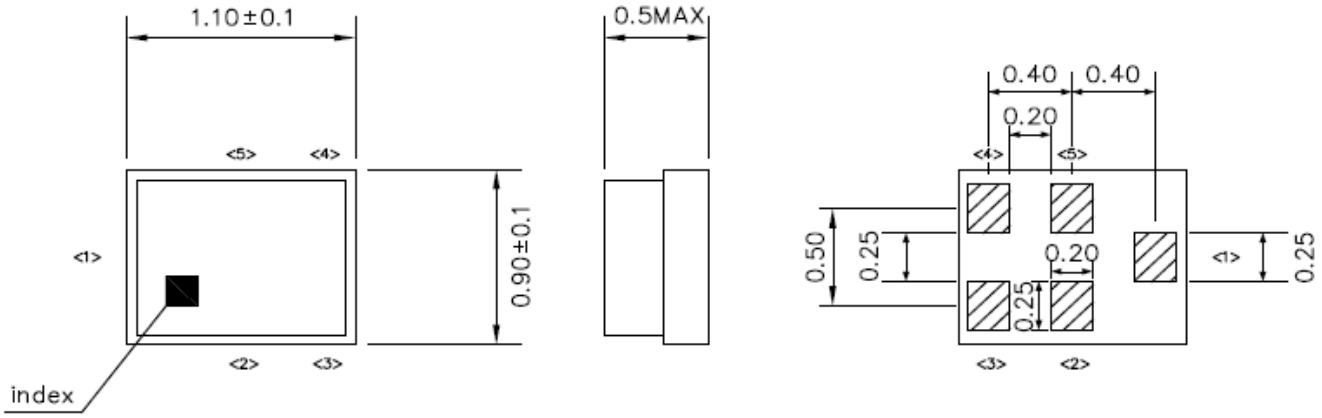


Measurement Circuit



Outline Drawing

Device size: 1.1mmtyp. x 0.9mmtyp. x 0.5mmmax.

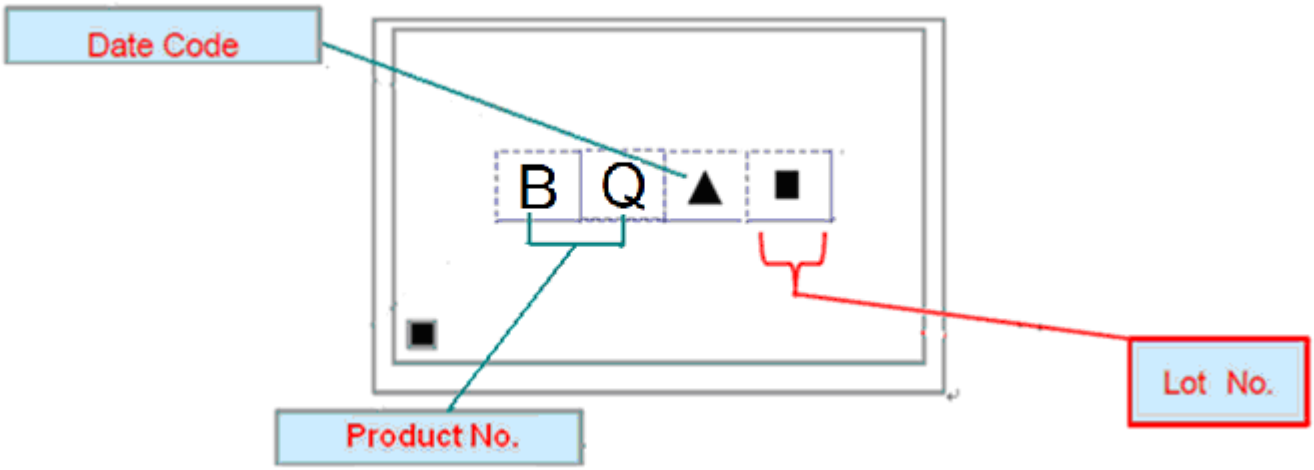


Unit: mm

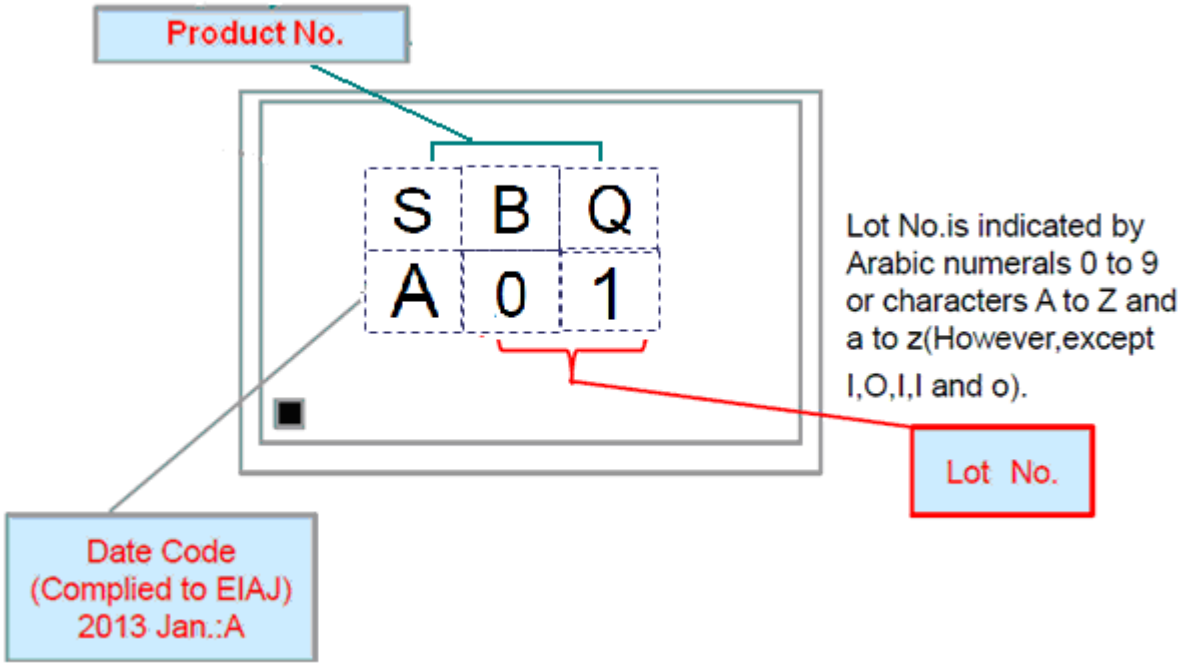
Pin Configuration

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

Top View (Sample Production):



Top View (Mass Production):

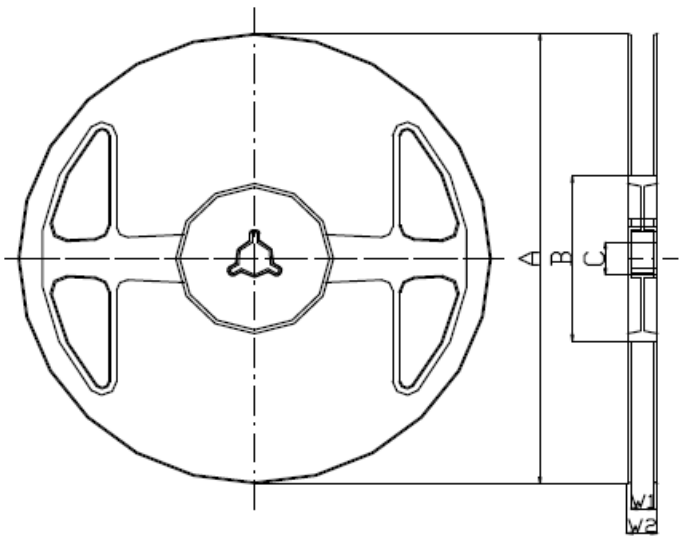


Product date code (EIAJ)

Year	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2015	a	b	c	d	e	f	g	h	j	k	l	m
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

Packing

Reel Dimension



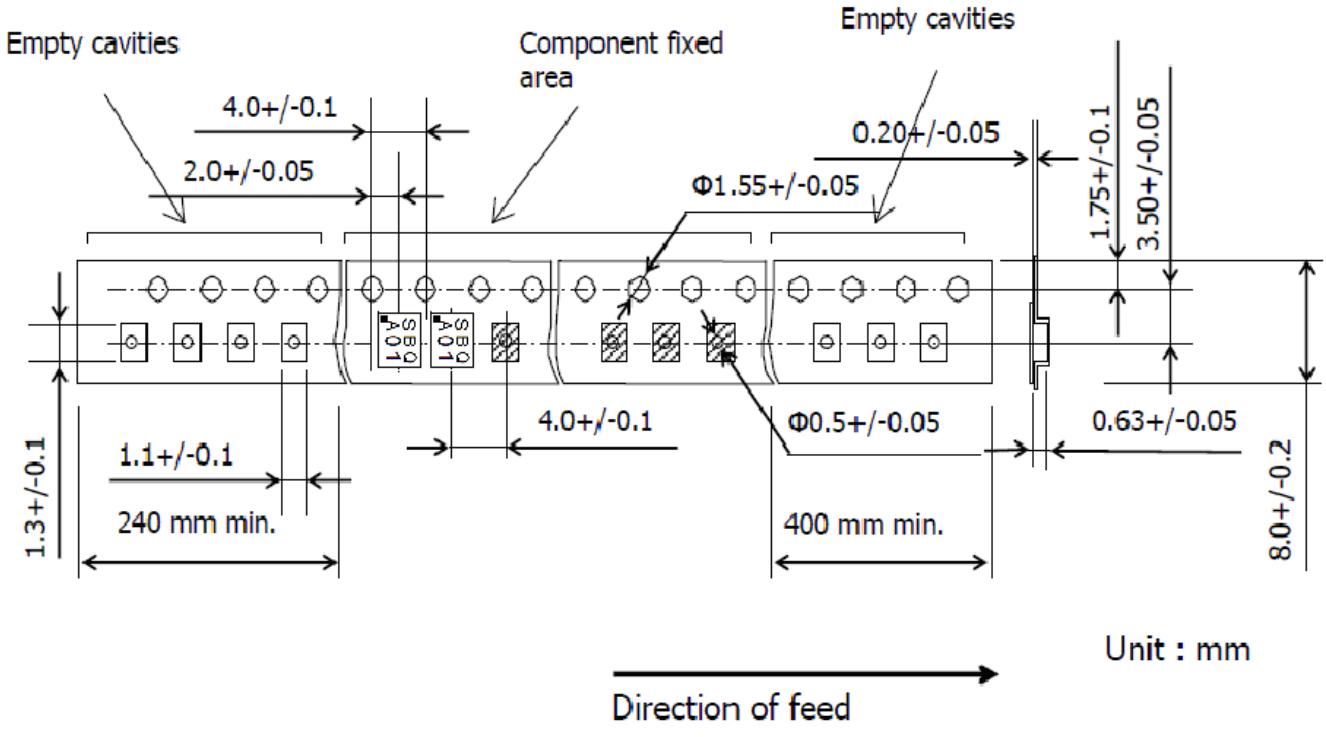
Materials of Reel

Material : Polystyrene + Carbon
Characteristics : Conforms to EIAJ-ET-7200A
Color : Black
Surface resistance (reference value) : $10^9\Omega$/sq Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
J	5,000 pcs	ϕ 180.0 +0.0/-1.5	ϕ 66.0 +/-0.5	ϕ 13.0 +/-0.2	9.0 +1.0/-0.0	11.4 +/-1.0

Tape Dimension



Recommended Temperature Profile of Reflow Soldering

The figure below shows the recommended temperature profile for reflow soldering in the case of lead-free solder alloy Sn3.0Ag0.5Cu.
Recommended number of reflow cycles is 5 maximum.
Suitable condition for solder heating is different depending on composition and manufacturing method. Please contact the solder manufacturer for details.