

SAW Filter 1585.6530MHz

Model: TA1859A

Part No: MP09248

Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

1. Maximum input power: +10dBm (in passband)
2. Maximum DC Voltage: ±5V (device only)
3. Operating temperature: -30°C to +85°C
4. Device storage temperature: -40°C to +100°C
5. Moisture Sensitive Level: Level 1

B. ELECTRICAL CHARACTERISTICS:

1. Terminating source impedance: $Z_S = 50\Omega$ (single-ended)
2. Terminating load impedance: $Z_L = 100 // 18nH \Omega$ (balanced)

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

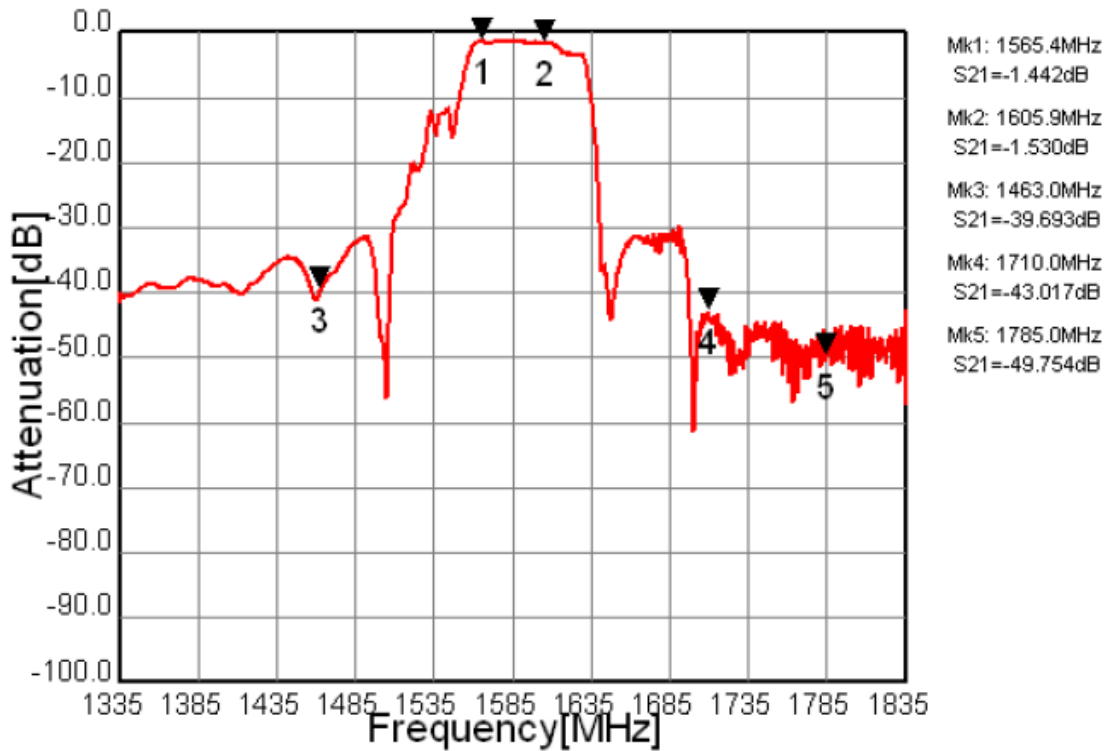
(*1) Specification of insertion loss includes loss that comes from the test board. (0.1dB)

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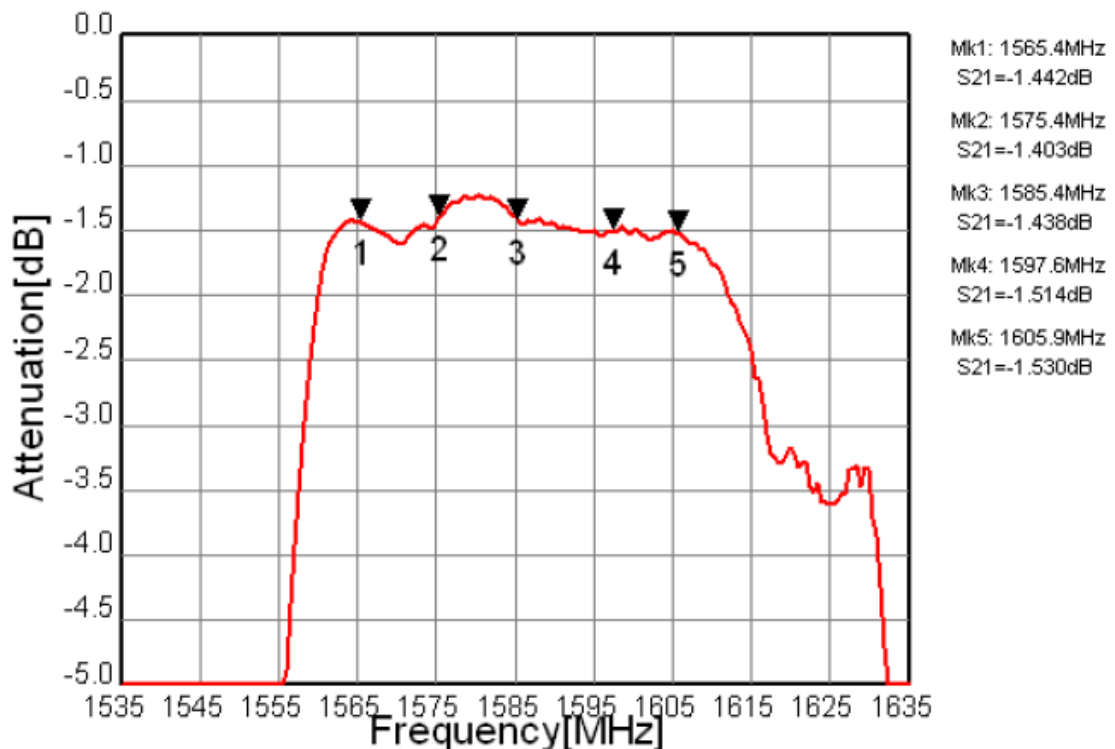
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C. FREQUENCY CHARACTERISTIC:

1. Pass-band



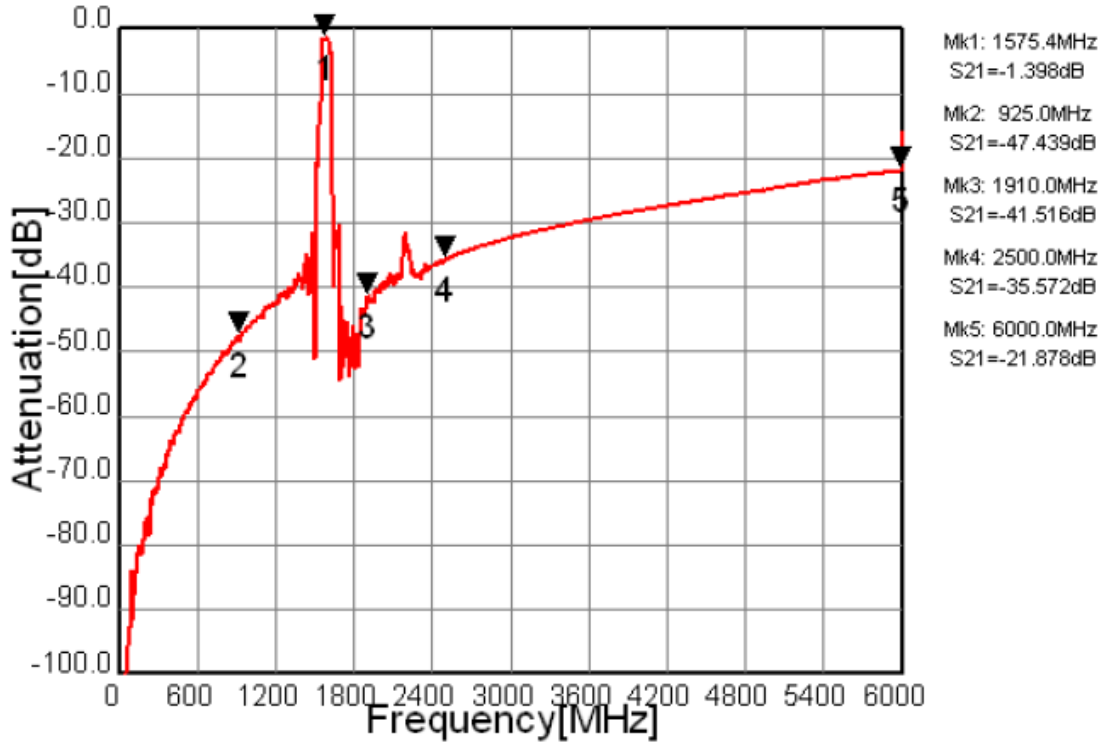
2. In-band



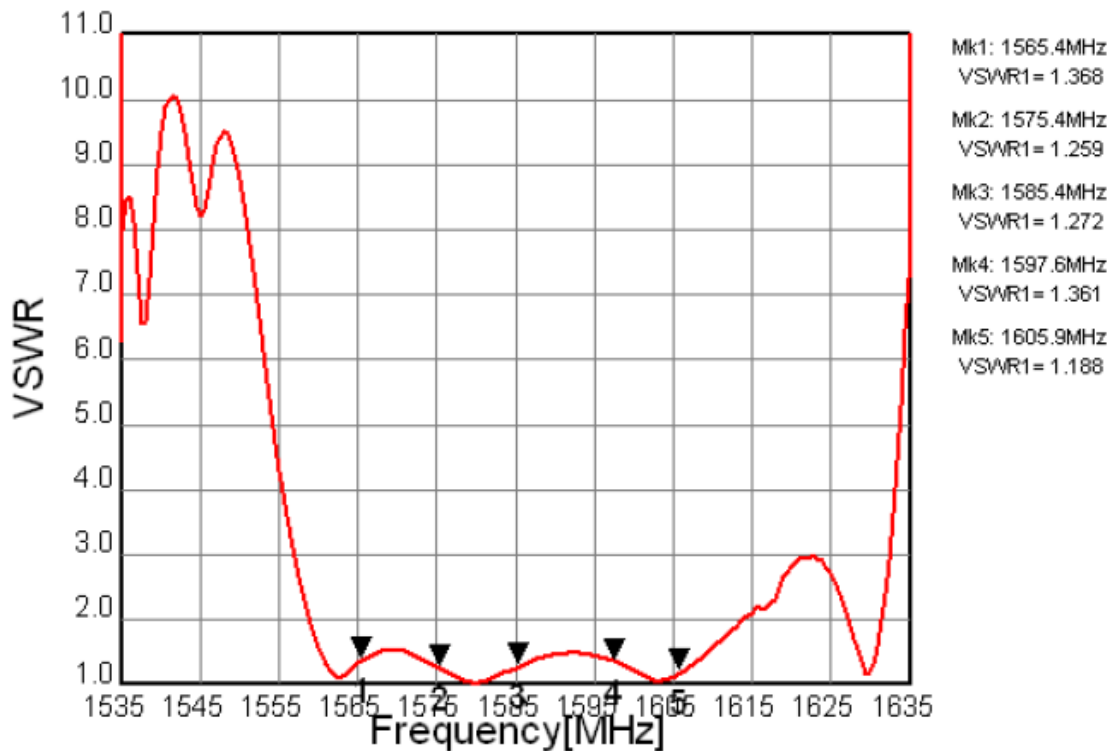
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3. Wide-band



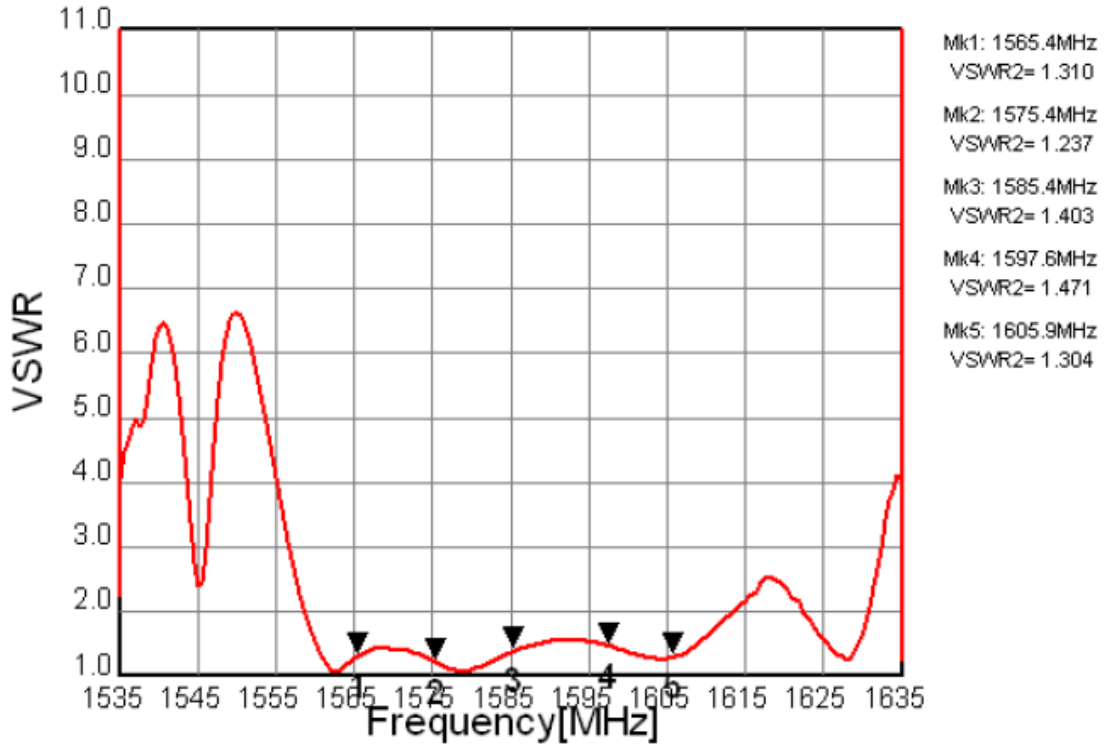
4. VSWR (Input)



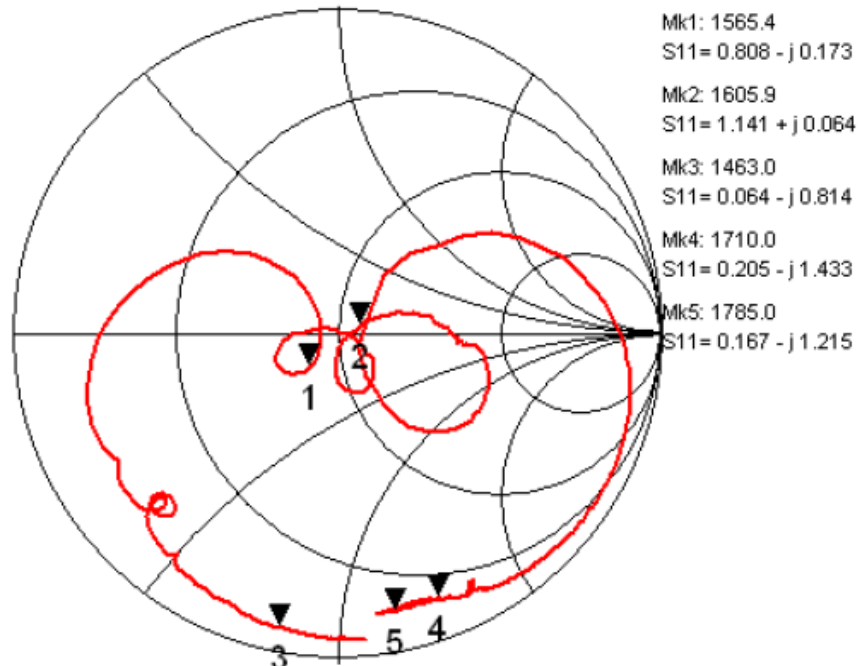
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5. VSWR (Output)



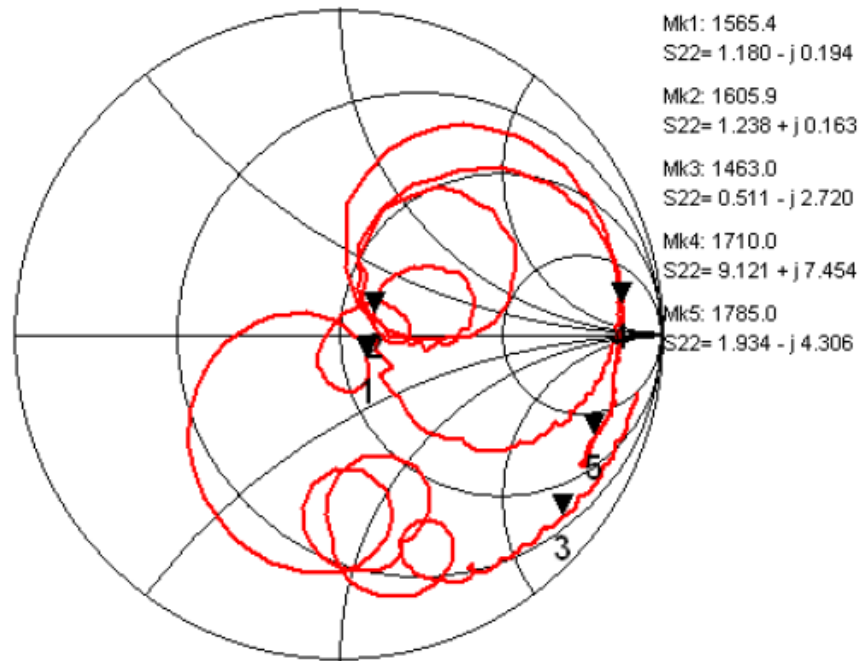
6. Input Impedance



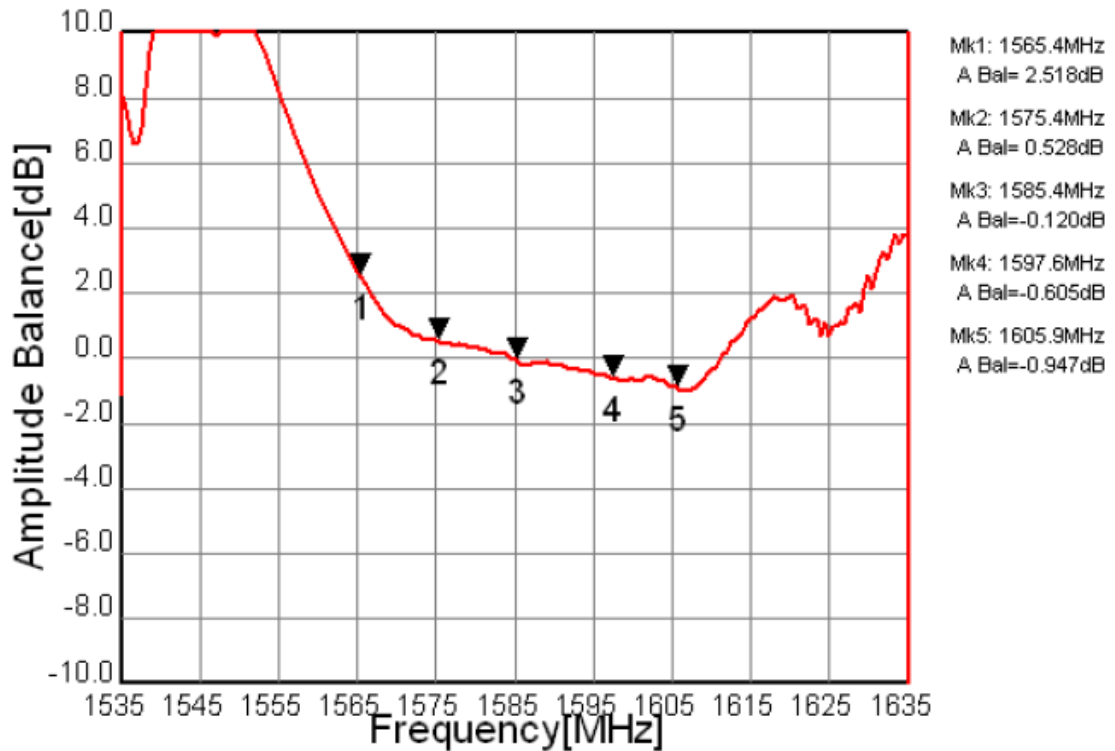
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7. Output Impedance



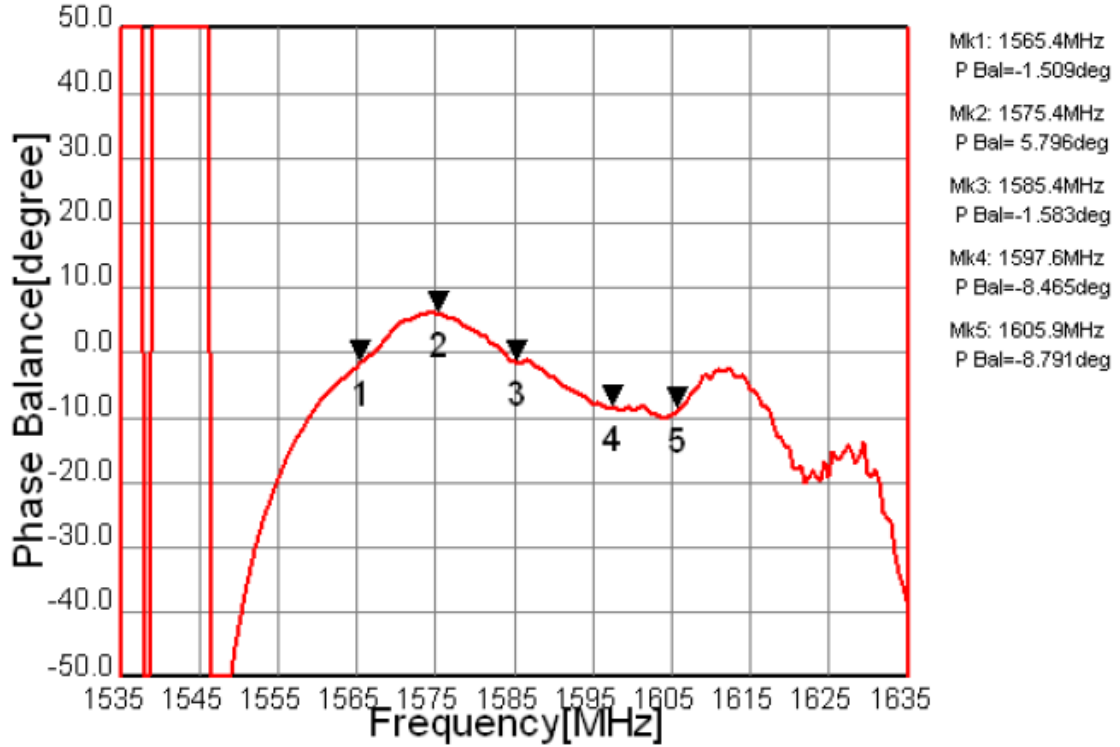
8. Amplitude balance



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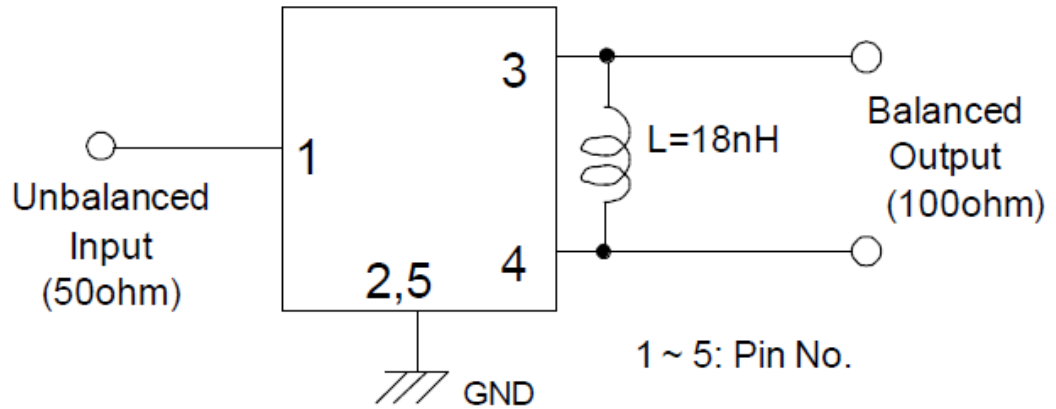
9. Phase balance



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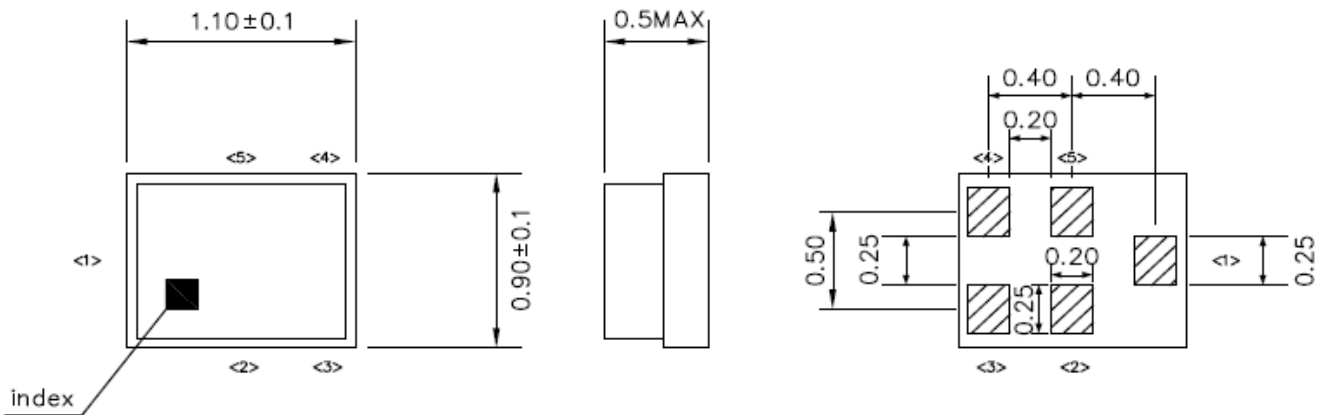
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D. MEASUREMENT CIRCUIT:



E. OUTLINE DRAWING:

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



Unit: mm

Pin Configuration

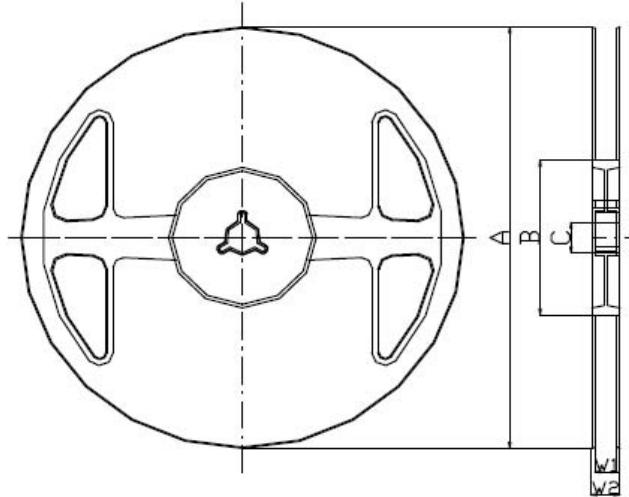
Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	OUT	Balanced pin
4	OUT	Balanced pin
5	GND	Ground

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F. PACKING:

1. Reel Dimension



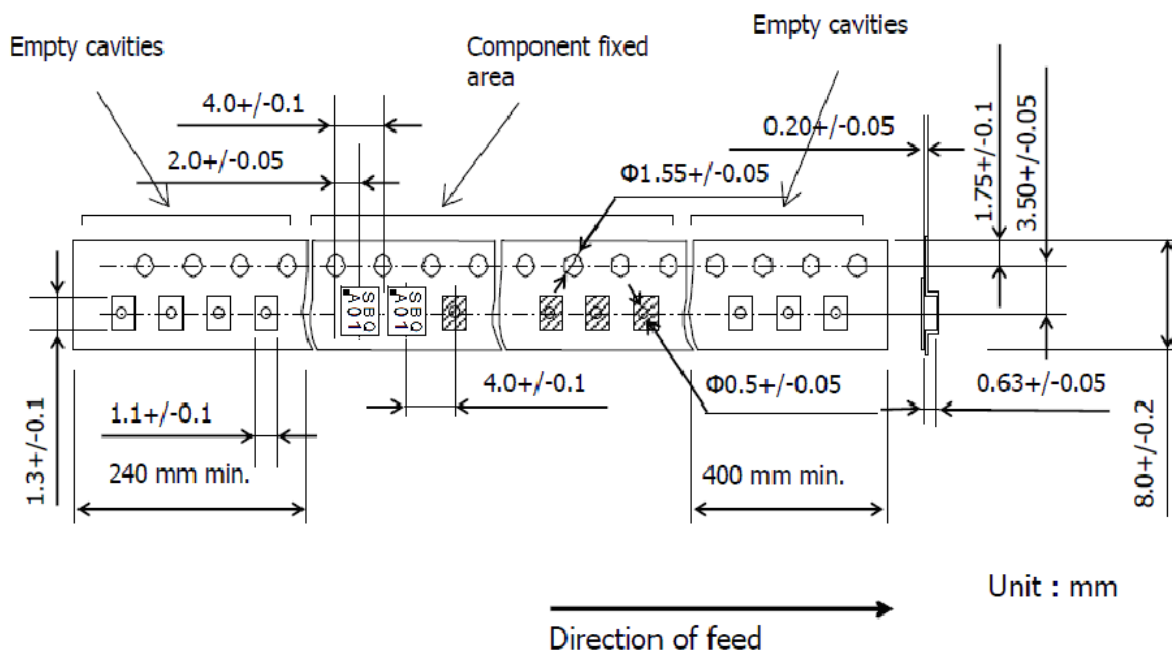
Materials of Reel

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
J	5,000 pcs	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

2. Tape Dimension



Unit : mm

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G. 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.

