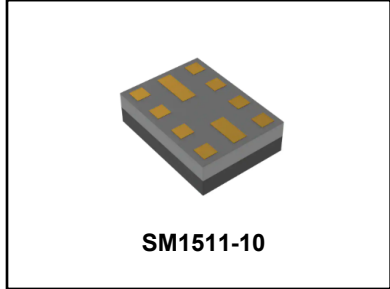


SF2710J

**1176.45 MHz
FILTER DIPLEXER**



Maximum Rating:

- Input Power Level: 15dBm.
- DC Voltage : 0 V
- Operating Temperature: -30°C to +85°C
- Storage Temperature: -40°C to +100°C
- Moisture Sensitivity Level: Level 1 (**MSL 1**)

Electrical Characteristics:

Filter1

Item		Unit	Min	Typ	Max	Remarks
Center frequency		MHz		1176.45		
Insertion Loss (*1)	1166.22-1186.68MHz	dB	-	1.0	1.6	
Amplitude Ripple	1166.22-1186.68MHz	dB	-	0.2	0.9	
VSWR	Input	1166.22-1186.68MHz	-	-	1.6	2.0
	Output	1166.22-1186.68MHz	-	-	1.5	1.9
Attenuation	10-824 MHz	dB	45	49	-	
	824-960 MHz	dB	40	46	-	
	1427-1463 MHz	dB	35	40	-	
	1710-1785 MHz	dB	36	44	-	
	1850-2025 MHz	dB	36	44	-	
	2300-2690 MHz	dB	39	49	-	
	2400-2483 MHz	dB	40	53	-	
	3400-3800 MHz	dB	34	41	-	
	4400-4900 MHz	dB	29	41	-	
	5150-5925 MHz	dB	29	41	-	



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

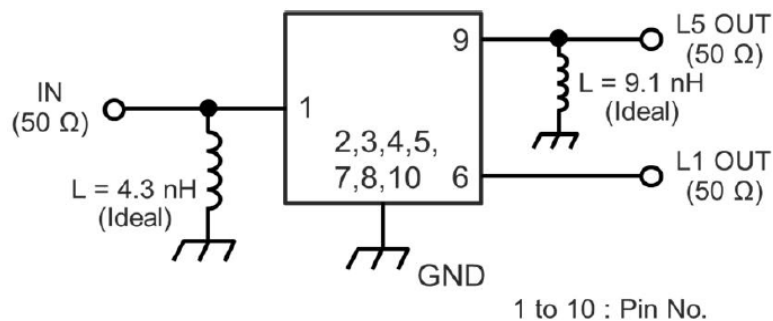
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Filter2

Item		Unit	Min	Typ	Max	Remarks	
Center frequency		MHz		1582.47			
Insertion Loss (*1)	1574.39-1576.45 MHz	dB	-	1.3	1.7		
	1559.05-1563.15 MHz	dB	-	1.7	2.3		
	1597.55-1605.89 MHz	dB	-	1.7	2.3		
Amplitude Ripple	1574.39-1576.45 MHz	dB	-	0.1	0.5		
	1559.05-1563.15 MHz	dB	-	0.2	1.2		
	1597.55-1605.89 MHz	dB	-	0.4	1.2		
VSWR	Input	1574.39-1576.45 MHz	-	-	1.3	1.9	
		1559.05-1563.15 MHz	-	-	1.3	1.9	
		1597.55-1605.89 MHz	-	-	1.4	2.0	
	Output	1574.39-1576.45 MHz	-	-	1.6	2.0	
		1559.05-1563.15 MHz	-	-	1.3	1.9	
		1597.55-1605.89 MHz	-	-	1.4	1.9	
Attenuation	10-824 MHz	dB	37	43	-		
	824-960 MHz	dB	35	41	-		
	1427-1463 MHz	dB	34	39	-		
	1710-1785 MHz	dB	35	40	-		
	1850-2025 MHz	dB	34	39	-		
	2300-2690 MHz	dB	35	40	-		
	2400-2483 MHz	dB	36	43	-		
	3400-3800 MHz	dB	40	54	-		
	4400-4900 MHz	dB	37	50	-		
	5150-5925 MHz	dB	33	51	-		
Item		Unit	Min	Typ	Max	Remarks	
Terminating Impedance	Filter1 Output port	Ω	50//9.1nH				
	Filter2 Output port	Ω	50				
	Common Input port	Ω	50//4.3 nH				
DC Impedance to ground		M Ω	100			Device only	

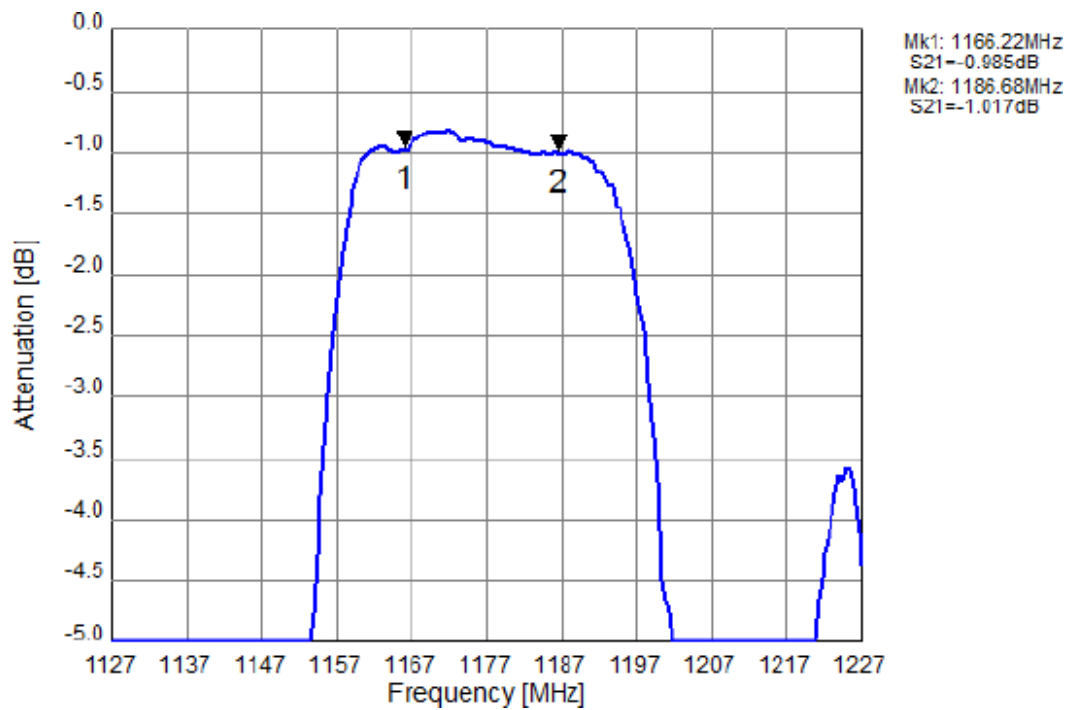
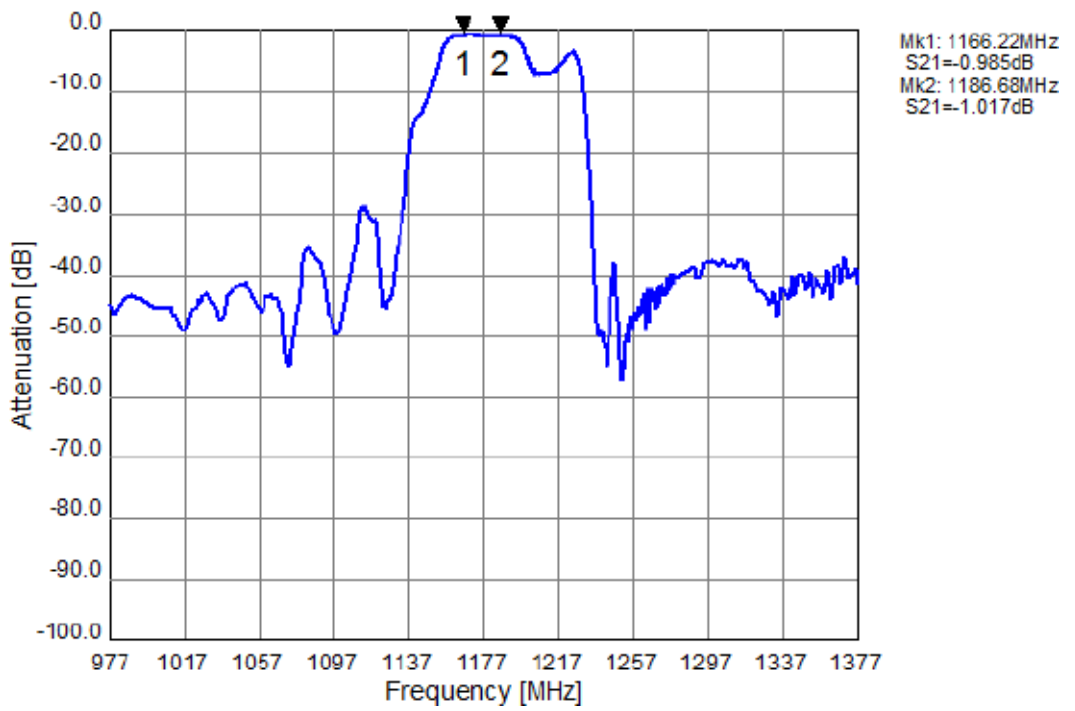
(*1)Specification of insertion loss excludes loss that comes from the test board.

Schematic

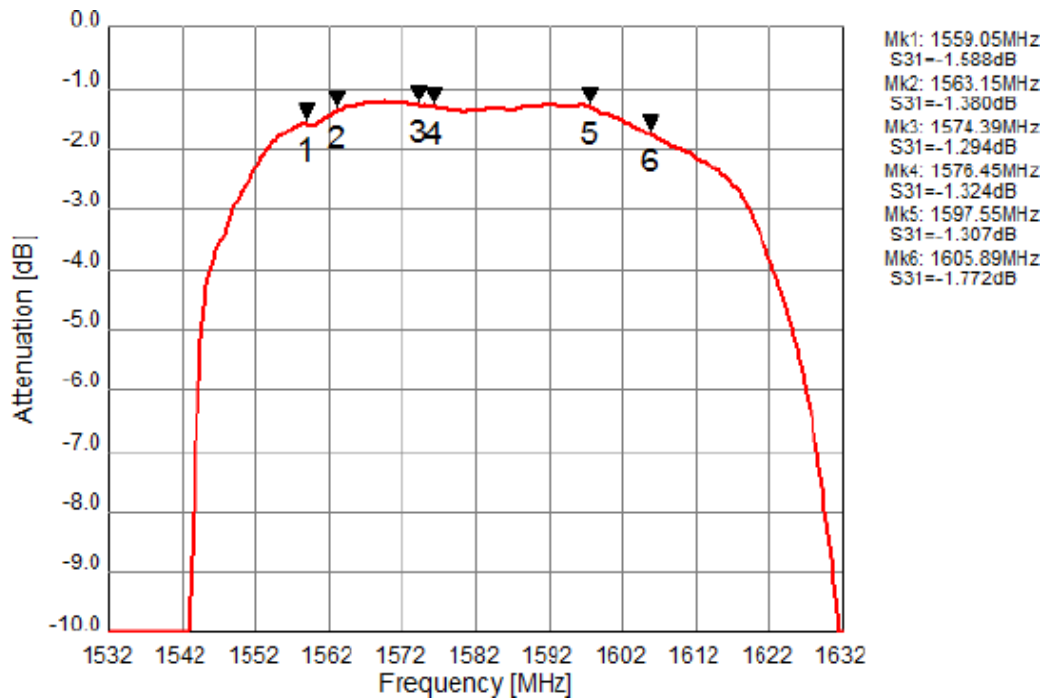
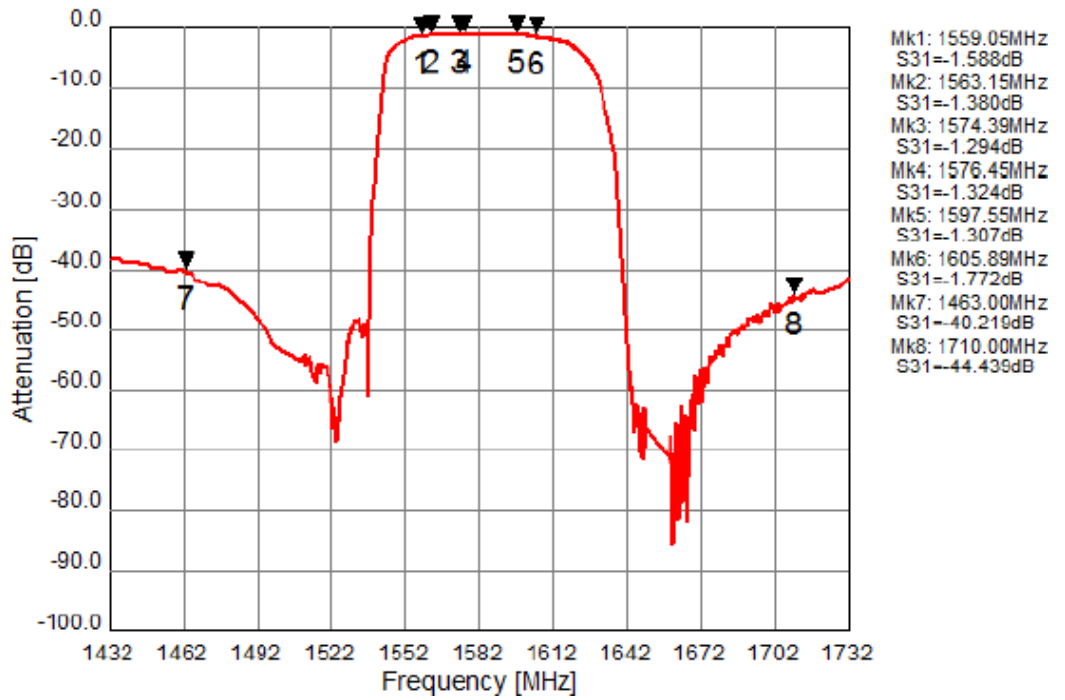


Performance Plots

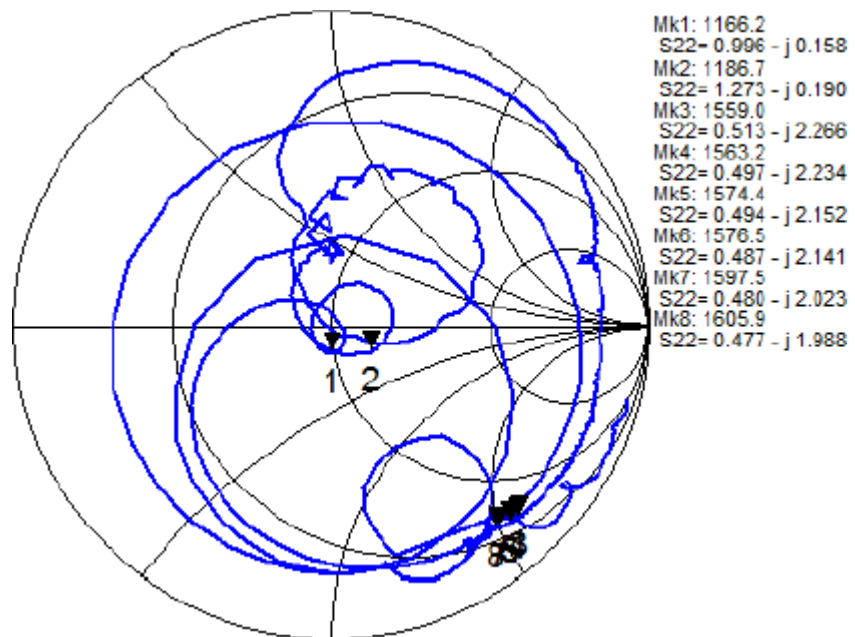
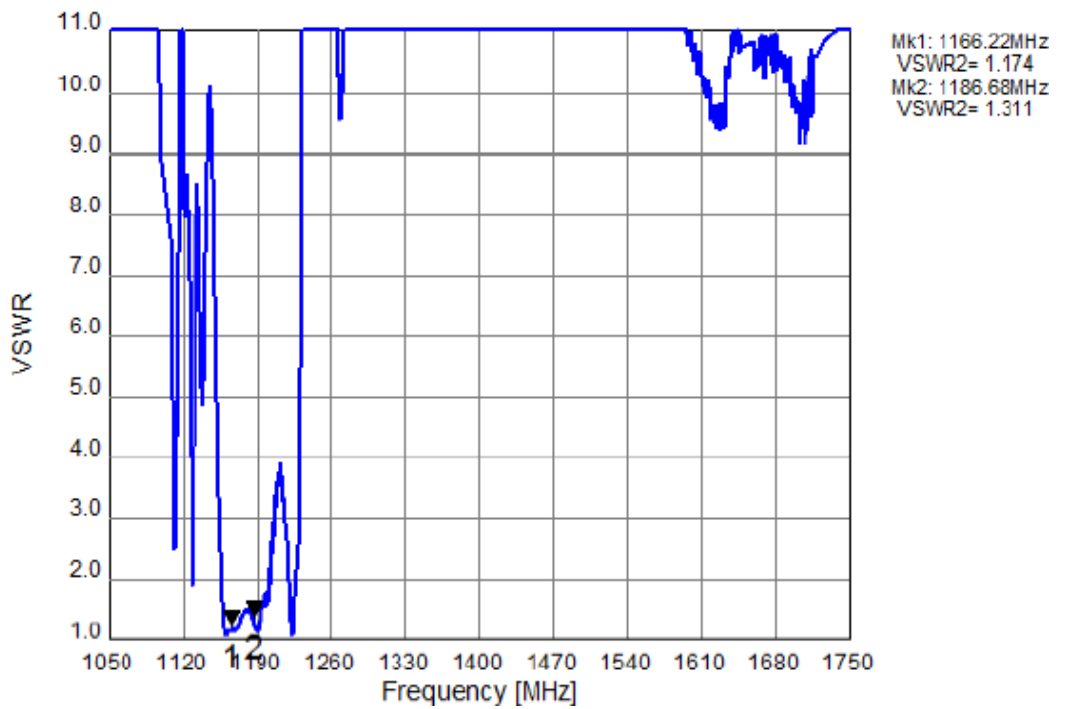
L5-Passband



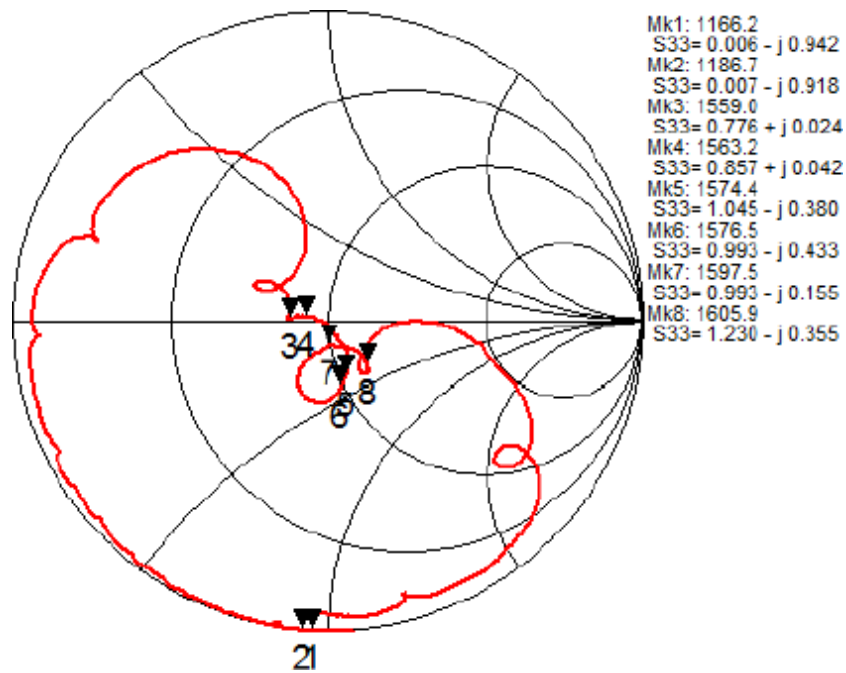
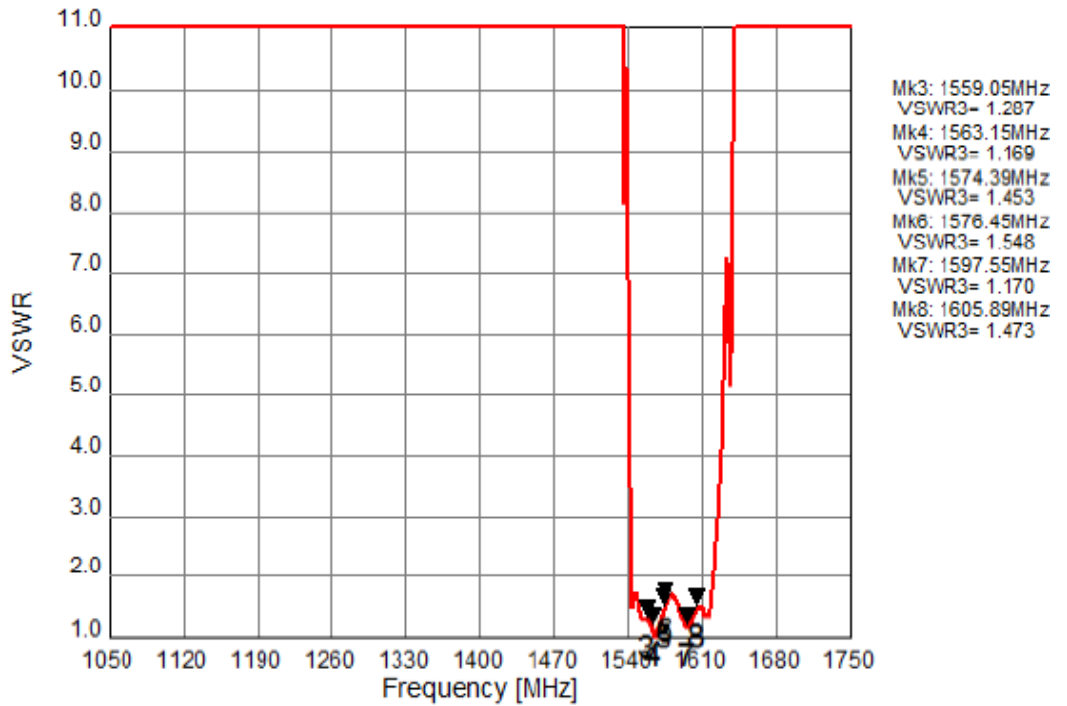
L1-Passband



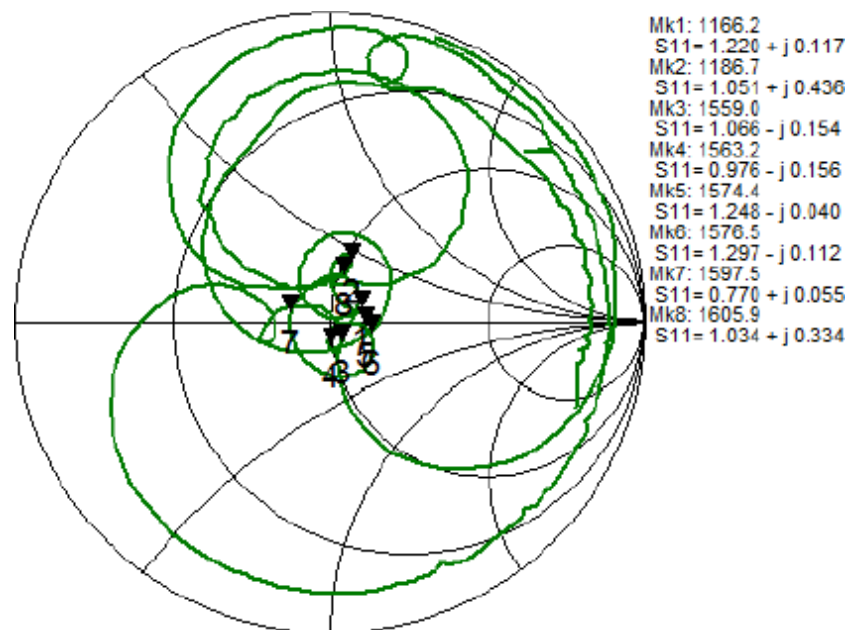
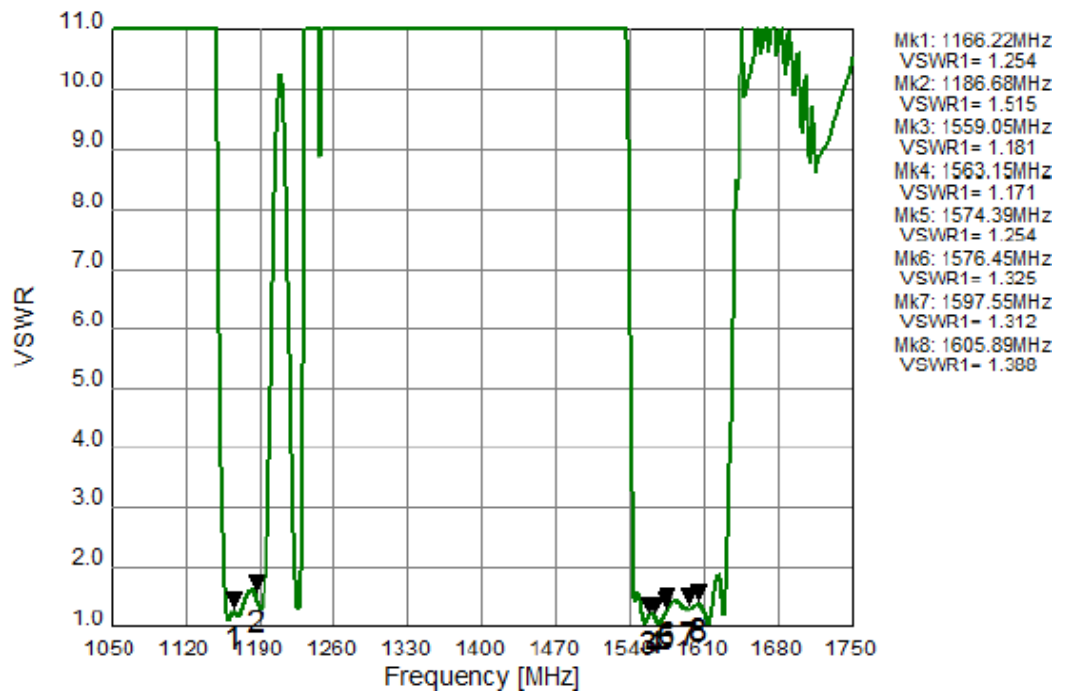
L5-Output Port



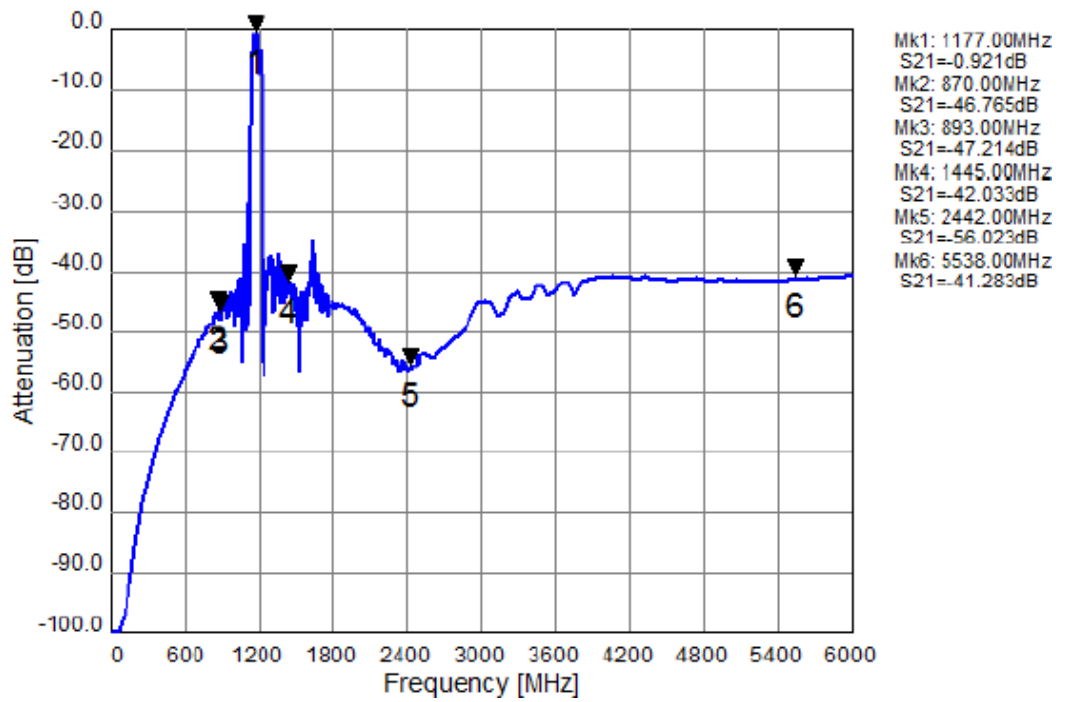
L1-Output Port



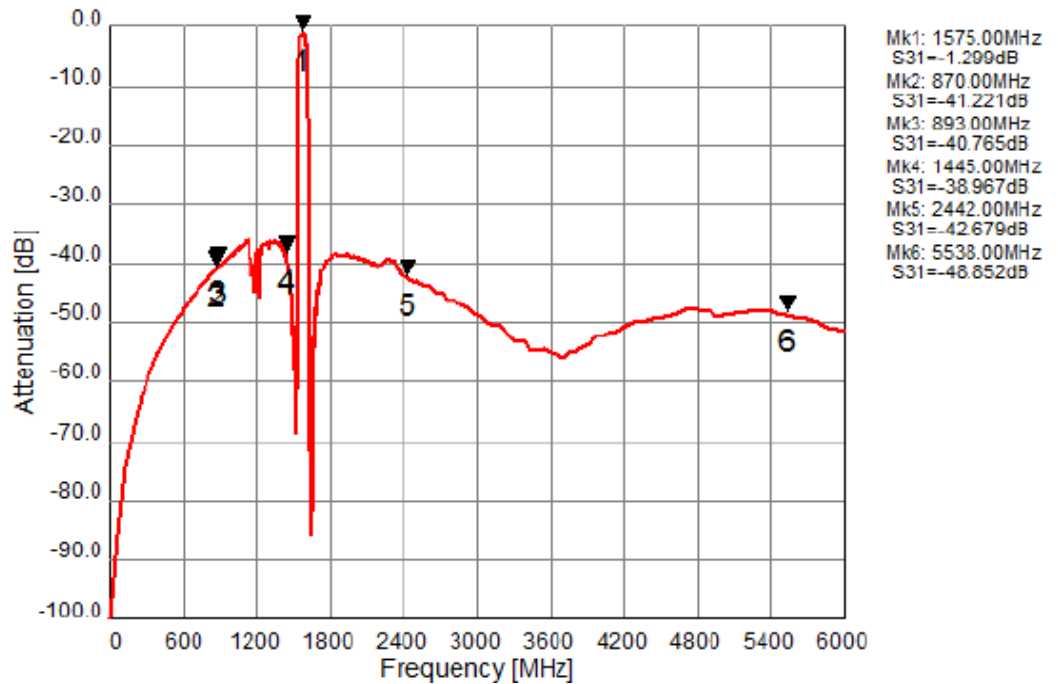
Input Port



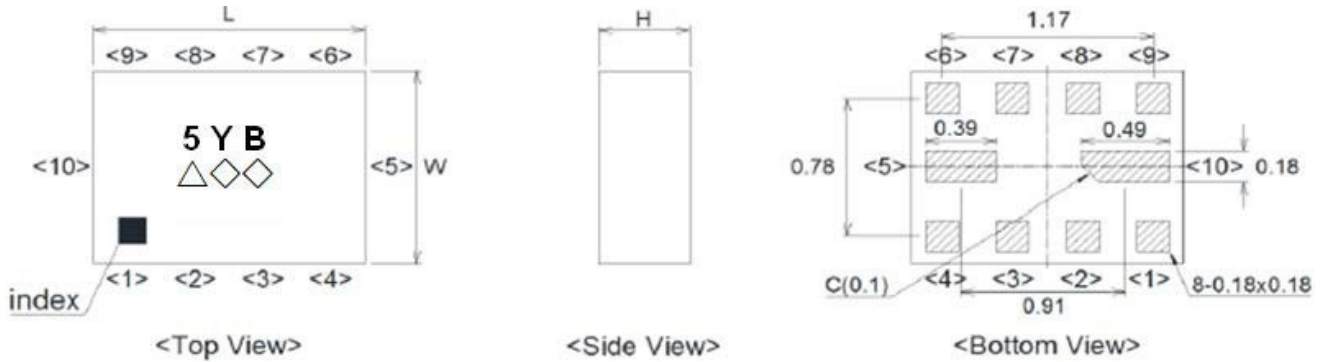
L5-Wide Span



L1-Wide Span



Package Drawing and Pin Description



Unit : mm
1 to 10 : Pin No.

Marking name: 5YB(Part Symbol)

△: Date Code.(2021 May → E,....., 2023 Dec → m)

◇◇: Lot Code.

$L = 1.5 \pm 0.1$ mm

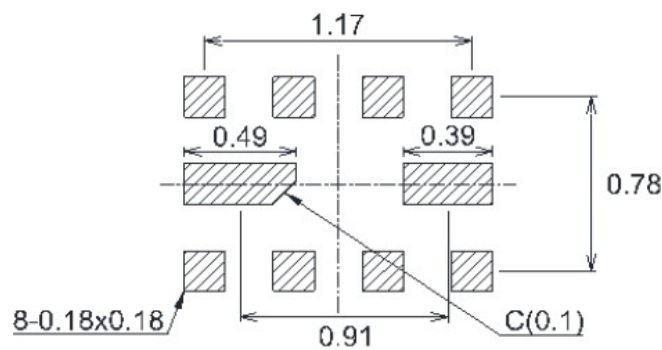
$W = 1.1 \pm 0.1$ mm

$H = 0.44$ mm Max

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2021	A	B	C	D	E	F	G	H	J	K	L	M
2025												
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2026												
2023	a	b	c	d	e	f	g	h	j	k	l	m
2027												
2024	n	p	q	r	s	t	u	v	w	x	y	z
2028												

* Note) Product date code rotates by the 4 years.

PCB Mounting Pattern



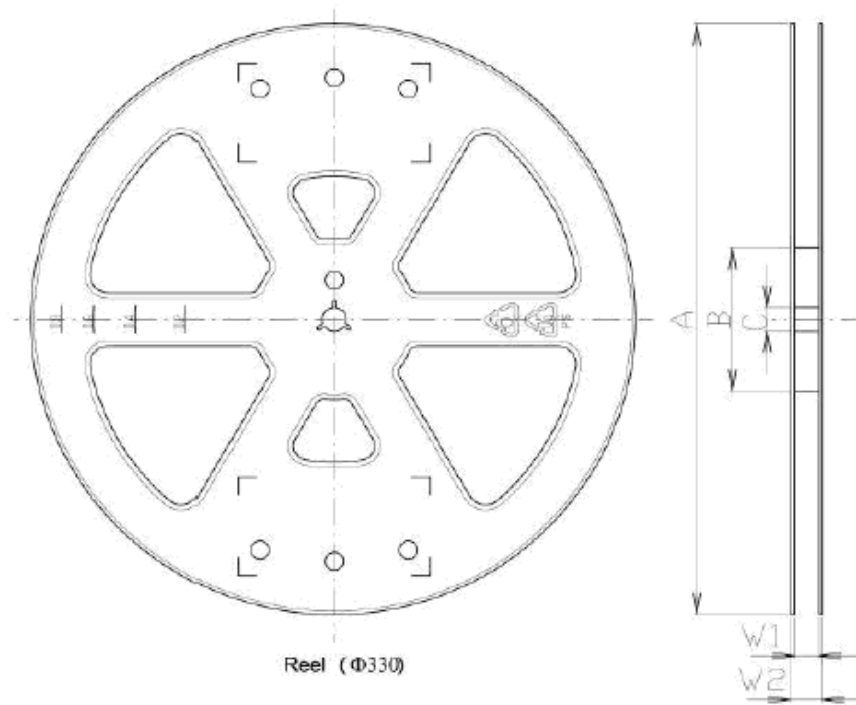
Unit : mm

Pin No.	Symbol	Function
1	IN	Common Input
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	L1 OUT	Filter2 Output
7	GND	Ground
8	GND	Ground
9	L5 OUT	Filter1 Output
10	GND	Ground

Notes:

- All units are in mm unless otherwise stated
- General Tolerance
 - Linear: X.XXX = ± 0.050 mm
 - X.XX = ± 0.10 mm
- Terminations
 - Au: 0.10 μ m min.
 - Pd: 0.10 μ m min.
 - Ni: 2-5 μ m
- Pin 1 indicated by 0.100 mm Chamfer

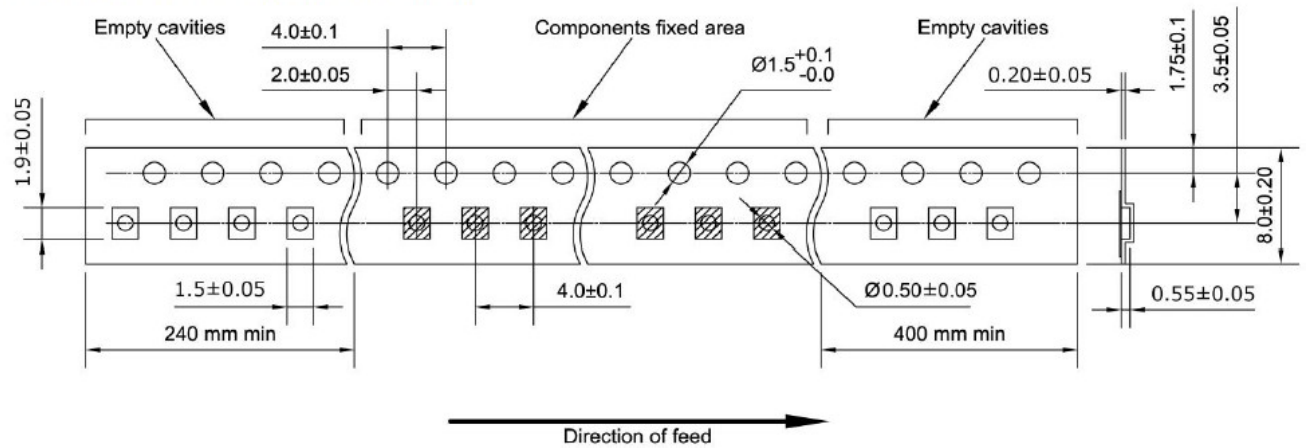
Reel Dimension



Order	Code	Quantity (pcs./reel)	A	B	C	W1	W2	Tape Pitch
Standard	Y	15,000	φ330	φ100	φ13 ±0.2	9.4 ±1.0	13.4 ±1.0	4.0 ±0.1
Option	J	5,000	φ180	φ60	φ13 ±0.2	9 +1.0/-0.0	11.4 ±1.0	4.0 ±0.1

Unit:mm

Dimensions of Tape (Standard)



Recommended Solder 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.

