RSJP5501P

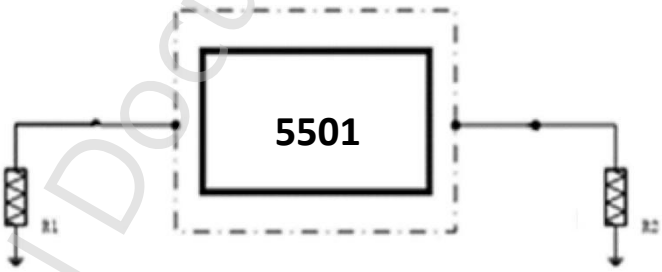
Wi-Fi Filter for 5170~5835MHz

Description

RSJP5501P is a WiFi6E filter, which is designed with BAW technology. The product can provide low insertion loss and steep skirt to enables coexistence of 5945-7065MHz signals within the same device or in close proximity to one another. The typical insertion loss in the pass band is less than 2.3dB. Typical rejection at 5945-7065 MHz is more than 46dB.

For the chip package, the RSJP5501P uses advanced module packing techniques to achieve the industry standard 1.8 x 1.6 x 0.61mm package, include bumping and flip chip.

Functional Block Diagram (Top View)



Reference Des.	Value	Description	Manuf.
R1	50ohm		
R2	50ohm		

Features

- Miniature Size
  1.8 mm x 1.6 mm x 0.61 mm
- Low insertion loss
  Passband 5170-5835MHz: 2.3dB Typ.
- High Rejection in 5945-7065MHz
  5945-7065MHz: 46dB Typ.
- Tx Input Power
  TBD
- ESD protection ability：TBD
- Moisture Sensitivity: MSL3
- Operation Temperature：-20 to +85℃
- Storage Temperature：-40 to +125℃

Pin Connection

No.	Function
1	Ant.
7	TRX
All other	GND

Environmental

- Full implement with RoHS compliant
- Lead Free (Pb free)

Electrical Specification

Parameter	Min(2)	Typ(1)	Max(2)	Unit
Insertion Loss (5170 ~ 5835 MHz) (3)	\	2.3	2.6	dB
Ripple(5170 ~ 5835 MHz)	\	0.8	1.5	dB
Return Loss(5170 ~ 5835 MHz, Input)	10	13	\	\
Return Loss(5170 ~ 5835 MHz, Output)	10	13	\	\
Absolute Attenuation				
30 ~ 1000 MHz	32	36	\	dB
1000 ~ 4200 MHz	30	20	\	dB
4200 ~ 5000 MHz	18	20	\	dB
5945 ~ 7065 MHz	36	46	\	dB
5945 ~ 7065 MHz(+25~+85℃)	41	46	\	dB
7200 ~ 8000 MHz	10	30	\	dB
RF Input Power (5170 ~ 5835 MHz)	\	\	TBD	dBm

(1) Typical value at 25℃

(2) Max/Min value at -20 to +85℃

(3) S-parameter averaged over specified pass band frequency at room temperature

Typical Performance at Tc=25℃

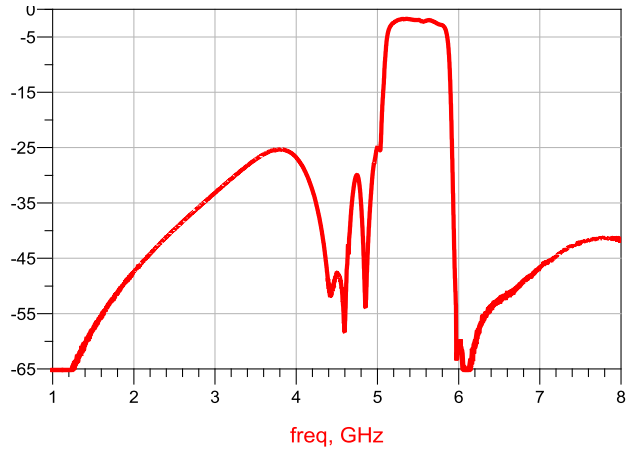


Figure.1 Wideband Attenuation

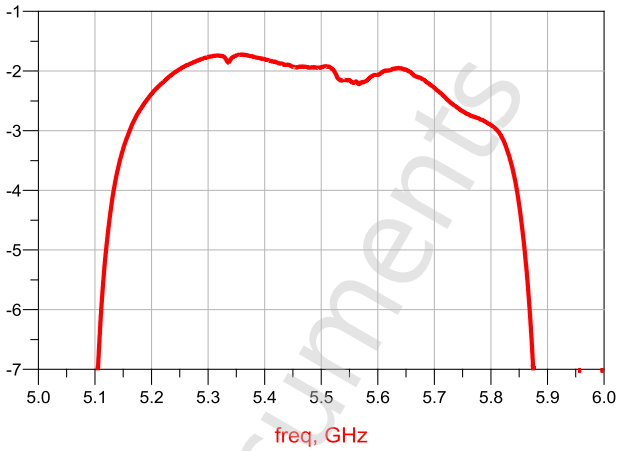


Figure.2 Passband Insertion Loss

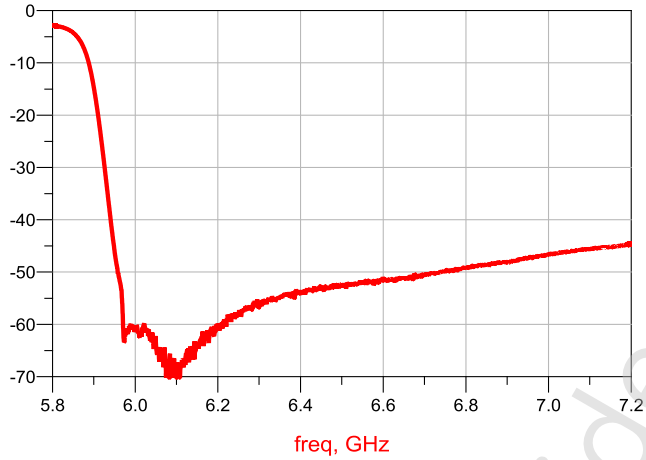


Figure.3 5945-7065MHz Near band

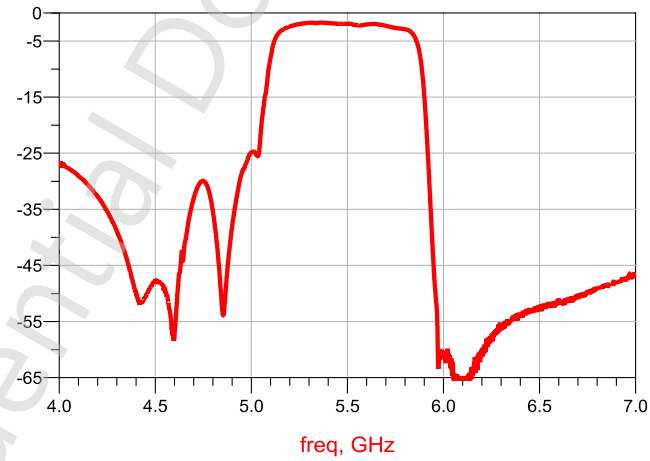


Figure.4 Narrow band

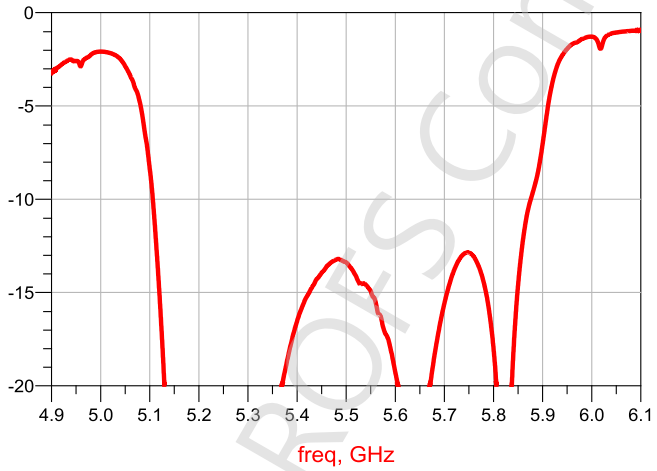


Figure.5 Return Loss (s11)

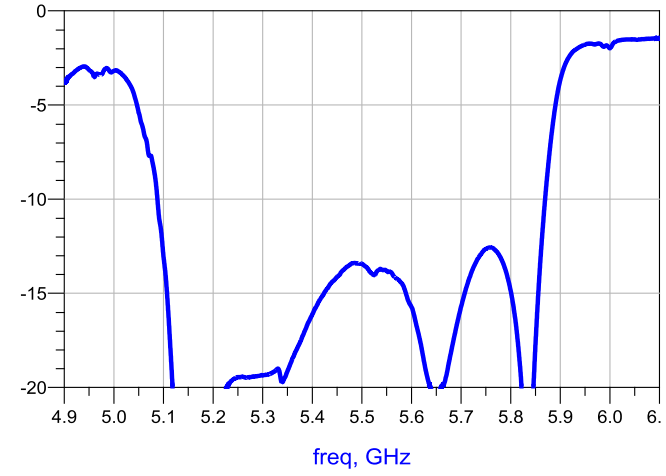


Figure.6 Return Loss (s22)

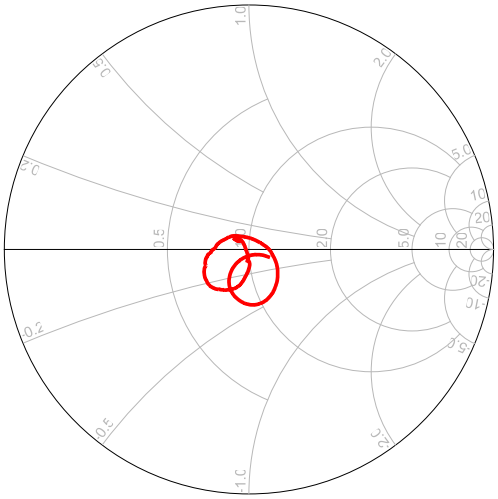


Figure.7 Input Smith chart S11

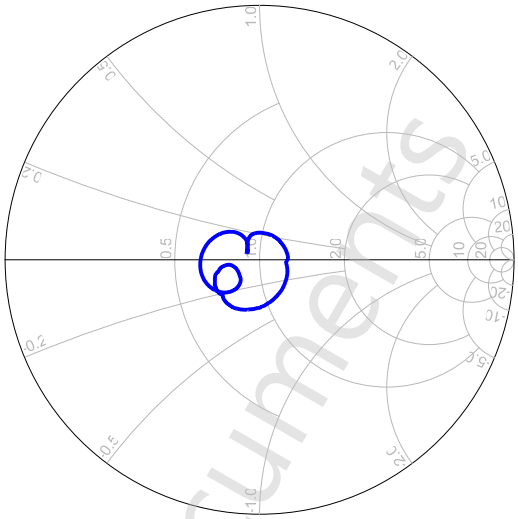
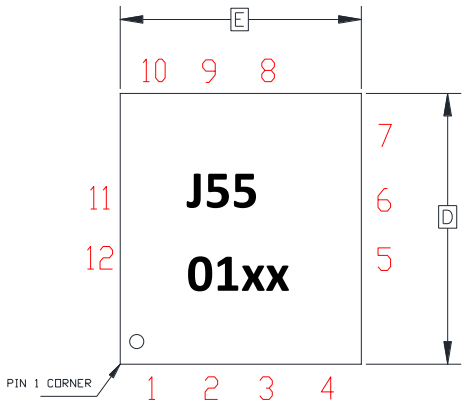
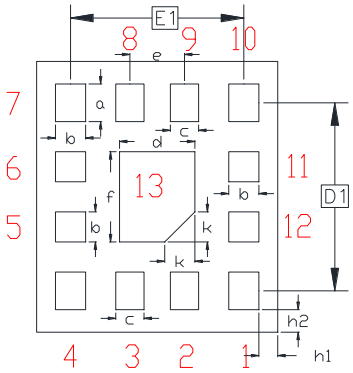


Figure.8 Output Smith chart S22

Package Outline



TOP VIEW



BOTTOM VIEW

SIDE VIEW

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.55	0.61	0.67
A1	0.18	0.21	0.24
D	1.75	1.80	1.85
D1		1.25 BASIC	
E	1.55	1.60	1.65
E1		1.150 BASIC	
e		0.3625 BASIC	
a	0.20	0.25	0.30
b	0.15	0.20	0.25
c	0.1375	0.1875	0.2375
d	0.45	0.50	0.55
f	0.55	0.60	0.65
k		0.200 REF	
h1		0.125 REF	
h2		0.150 REF	

Notes:

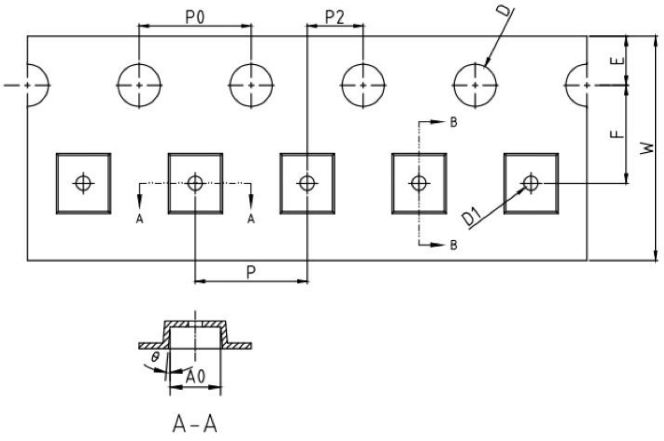
1. Dimension: mm
2. Dimensions nominal unless otherwise noted
3. Contact areas are gold plated
4. J5501 is product code

Pin connection:

1	Ant
7	TRX
All other	Ground

Packing

1. Tape Dimension



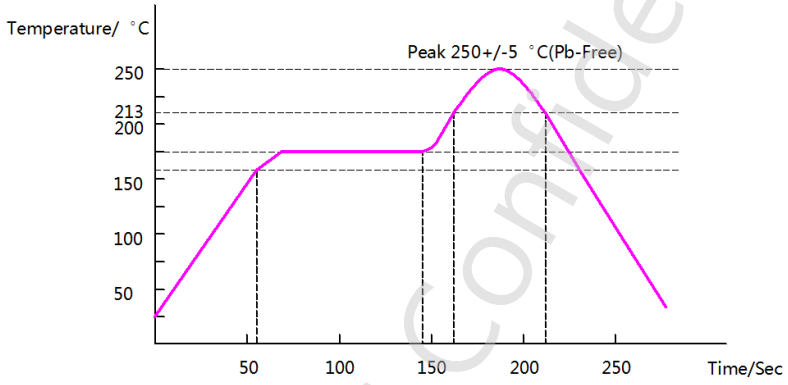
共同尺寸

外观	尺寸 (MM)
E	1.75±0.10
F	3.50±0.05
P_2	2.00±0.05
D	1.55±0.05
D_1	0.50±0.05
P_0	4.00±0.10
$10P_0$	40.0±0.20

变动尺寸

外观	尺寸 (MM)
W	$8.00^{+0.30}_{-0.10}$
P	4.00±0.10
A_0	1.80±0.05
B_0	2.00±0.05
K_0	0.78±0.05
t	0.20±0.02
θ	3°TYP

Recommended Reflow Profile



For more information, please contact: rofs_sales1@rofsmicro.com

Notes:

The specification may be changed or the product had been discontinued, please check with our sales or product Engineer before order