

Description

YTLP2551D is a LTE Band 41 (2515-2675MHz) Tx/Rx bandpass filter designer for use in High Power User Equipment applications with a package size of only 1.4x1.1mm.

YTLP2551D is designed with Film Bulk Acoustic Resonator (FBAR) technology, which provides high-Q filters and meet requirements of low insertion loss, high out-of-band attenuation, high power handling and stringent linearity.

YTLP2551D uses chip scale packaging (CSP) technology to assembly the filters into a molded chip-on-board module.

Features

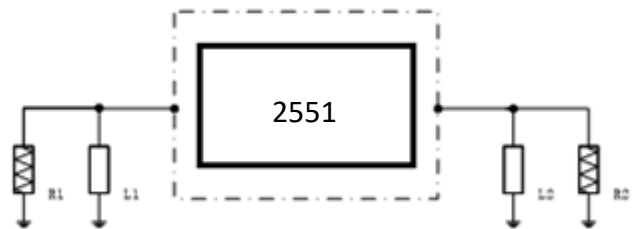
- Miniature Size
1.4mm x 1.1 mm x 0.59 mm
- Low insertion loss
 - Tx/Rx bandpass, 2515-2675MHz: 1.7dB Typ.
- High Rejection in 2.4G Wi-Fi and 5G New Band
 - 2.4G Wi-Fi: 42dB Typ.
- HPUE: 32dBm, 55°C, 5000h
- Operation Temperature: -20 to +85°C
- Storage Temperature: -40 to +85°C

Environmental

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



Functional Block Diagram (Top View)



Reference Des.	Value	Description	
R1	50ohm		
R2	50ohm		
L1	4.7nH	Inductor	Pin1_Input
L2	4.7nH	Inductor	Pin4_Output

Pin Connection

No.	Function
1	Tx/Rx
2	GND
3	GND
4	Ant
5	GND

Electrical Specification



Transmit Port to Antenna Port

Parameter(Operable Temperature: (-20° C ~ +85° C))	Min	Typ*	Max	Unit
Insertion Loss				
(2515~2595MHz)	\	1.7	2.3	dB
(2595~2675MHz)	\	1.3	1.9	
Ripple				
(2515~2675MHz)	\	0.3	0.7	dB
VSWR				
Tx/Rx Port (2515~2675MHz)	\	1.33	1.67	dB
Ant Port (2515~2675MHz)	\	1.33	1.67	dB
Absolute Attenuation				
(10~699MHz)	40	50	\	dB
(699~916MHz)	30	42	\	dB
(916~1565MHz)	17	28	\	dB
(1565~1615MHz)	18	28	\	dB
(1615~1710MHz)	18	28	\	dB
(1710~1785MHz)	20	28	\	dB
(1805~1880MHz)	22	29	\	dB
(1880~1920MHz)	20	28	\	dB
(1920~1980MHz)	20	30	\	dB
(2110~2170MHz)	25	32	\	dB
(2300~2400MHz)	35	42	\	dB
(2401~2468MHz)	35	42	\	dB
(2451~2473MHz)	35	42	\	dB
(2456~2478MHz)	35	42	\	dB
(2461~2483MHz)	25	30	\	dB
(2760~2850MHz)	25	30	\	dB
(2850~3300MHz)	30	36	\	dB
(3300~4200MHz)	30	36	\	dB
(4400~4992MHz)	40	52	\	dB
(4992~5380MHz)	40	50	\	dB
(5380~7487MHz)	30	38	\	dB
(7487~8070MHz)	25	32	\	dB

Typical Performance at Tc=25°C



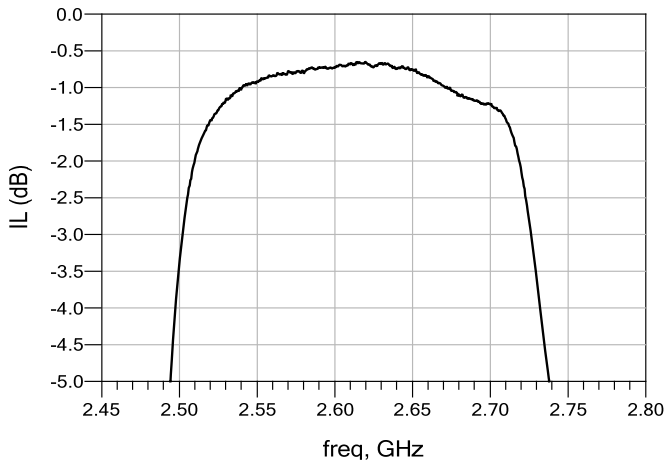


Figure1. Pass Band

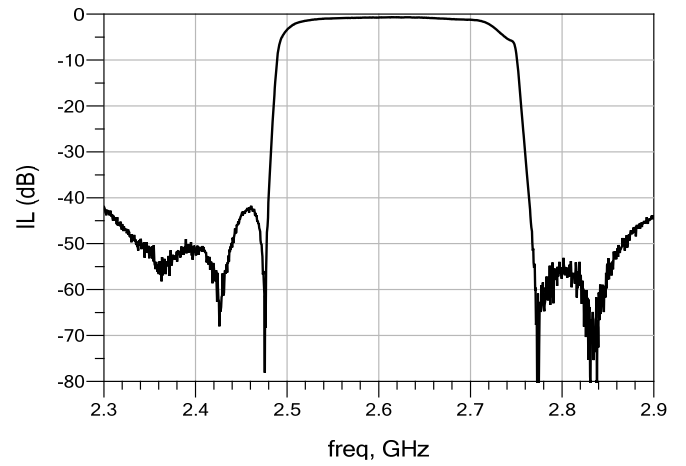


Figure2. Narrow Band

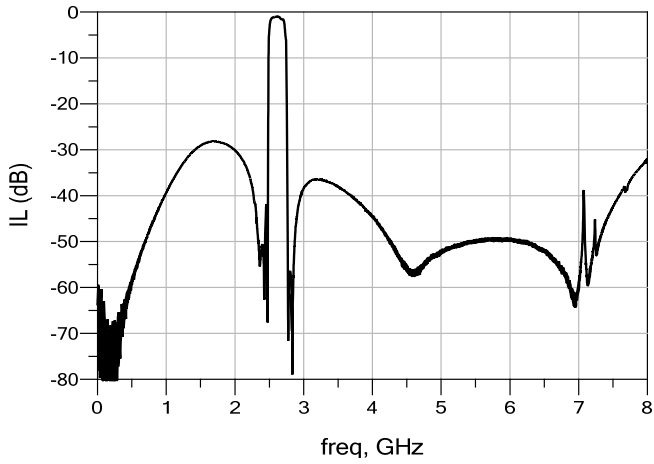


Figure3. Wide Band

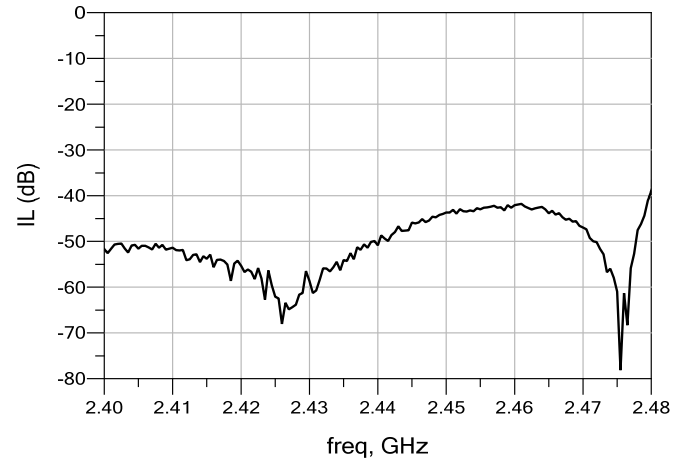


Figure4. Rejection in 2.4G Wi-Fi

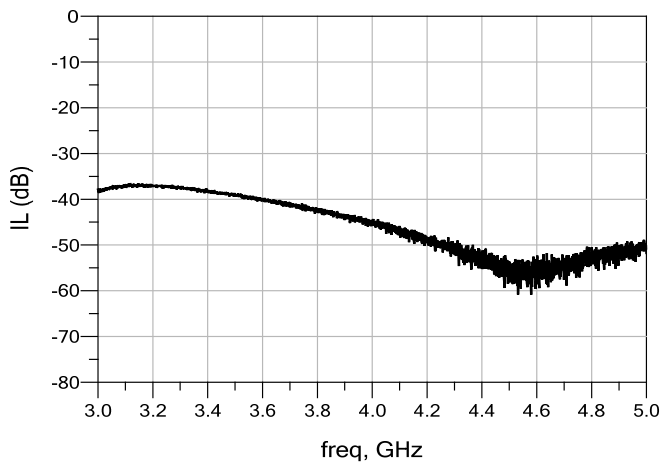


Figure5. Rejection in LTE 5G

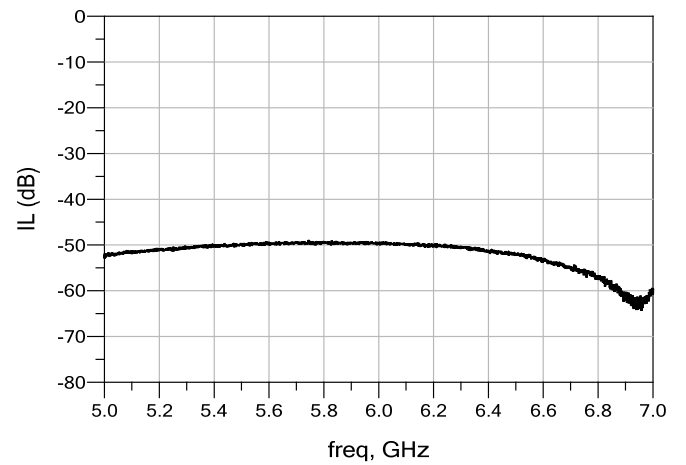
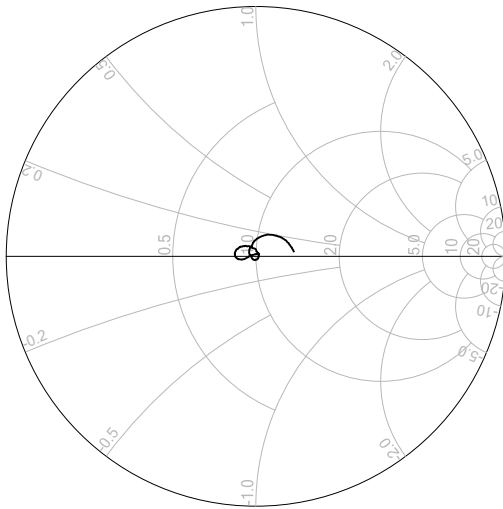


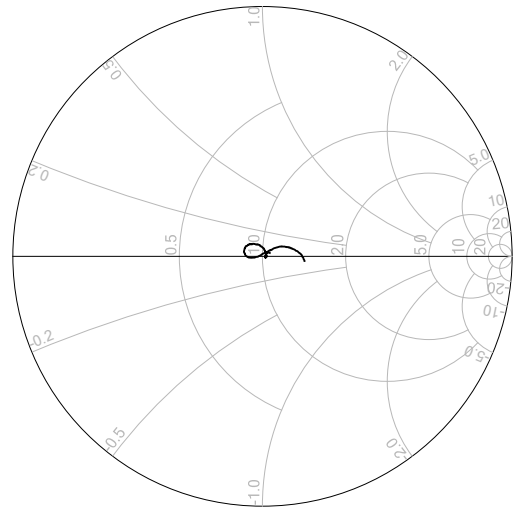
Figure6. Rejection in 5G Wi-Fi





freq (2.515GHz to 2.675GHz)

Figure7. S11

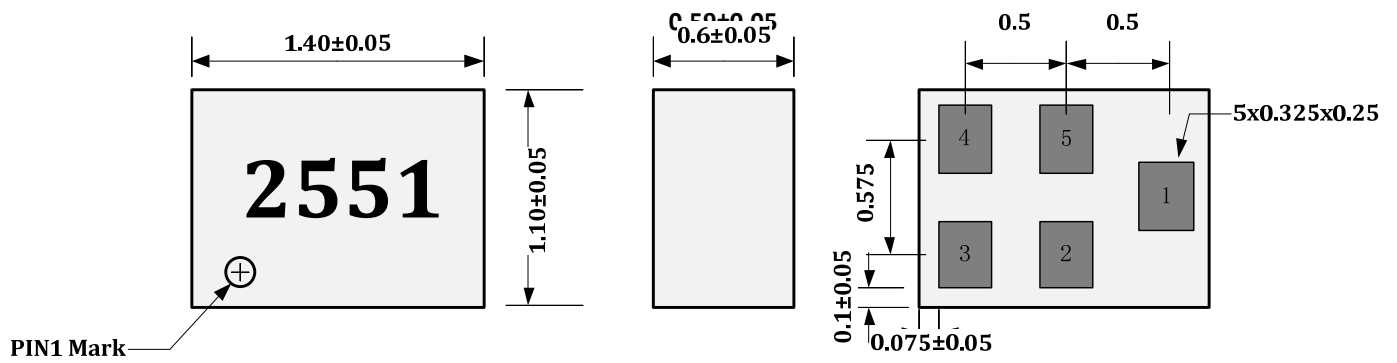


freq (2.515GHz to 2.675GHz)

Figure8. S22



Package Outline



Note:

1. Dimension: mm
2. Dimensions nominal unless otherwise noted
3. Contact area are gold plated

No.	Function
1	Tx/Rx
2	GND
3	GND
4	Ant
5	GND

