

Description

YTLP2511E is a LTE Band 41 (2535-2655MHz) Tx/Rx bandpass filter designer for use in High Power User Equipment applications with a package size of only 1.1x0.9mm.

YTLP2511E 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.

YTLP2511E uses chip scale packaging (CSP) technology to assembly the filters into a molded chip-on-board module.

Features

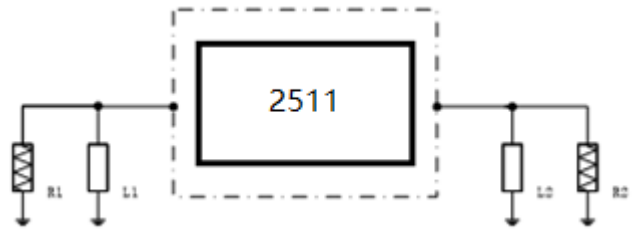
- Miniature Size
1.1mm x 0.9 mm x 0.6 mm
- Low insertion loss
 - Tx/Rx bandpass, 2535-2655MHz: 0.9dB Typ.
- High Rejection in 2.4G Wi-Fi and 5G New Band
 - 2.4G Wi-Fi: 45dB Typ.
- HPUE: 32dBm, 55°C, 5000h
- Operation Temperature: -20 to +85°C
- Storage Temperature: -40 to +85°C

Environmental

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



Functional Block Diagram (Top View)



Reference Des.	Value	Description	
R1	50ohm		
R2	50ohm		
L1	4.3nH	Inductor	Pin1_Input
L2	5.1nH	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 to +85℃)	Min	Typ*	Max	Unit
Insertion Loss (2535~2655MHz)	\	1.2	2.0	dB
Ripple (2535~2655MHz)	\	0.3	1	dB
VSWR (2535~2655MHz, Tx/Rx Port)	\	1.15	1.35	\
VSWR (2535~2655MHz, Ant Port)	\	1.15	1.35	\
Absolute Attenuation				
(10~699MHz)	37	42	\	dB
(699~916MHz)	30	35	\	dB
(916~1565MHz)	17	22	\	dB
(1565~1615MHz)	17	22	\	dB
(1615~1710MHz)	17	22	\	dB
(1710~1785MHz)	17	22	\	dB
(1805~1880MHz)	17	22	\	dB
(1880~1920MHz)	17	22	\	dB
(1920~1980MHz)	17	22	\	dB
(2110~2170MHz)	18	23	\	dB
(2300~2400MHz)	15	19	\	dB
(2401~2468MHz)	34	39	\	dB
(2451~2473MHz)	35	40	\	dB
(2456~2478MHz)	35	40	\	dB
(2461~2483MHz)	35	40	\	dB
(2760~2850MHz)	25	29	\	dB
(2850~3300MHz)	27	27	\	dB
(3300~4200MHz)	25	29	\	dB
(4400~4992MHz)	40	44	\	dB
(4992~5380MHz)	45	51	\	dB
(5380~7487MHz)	28	33	\	dB
(7487~8070MHz)	26	31	\	dB

Typical Performance at Tc=25℃



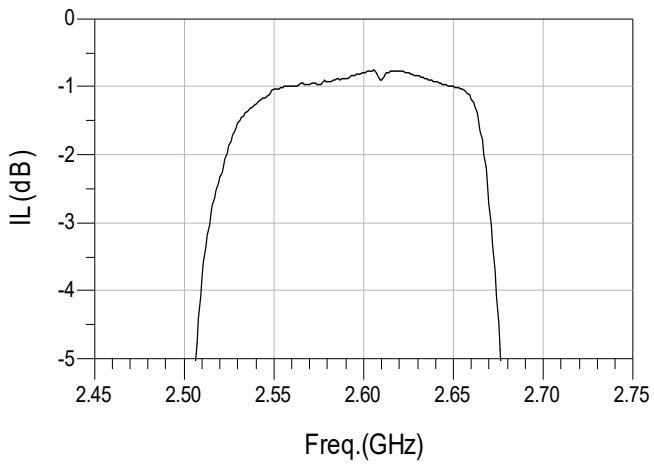


Figure1. Pass Band

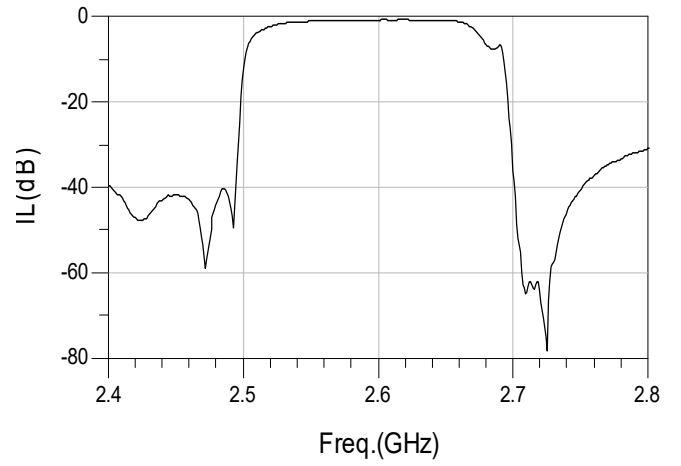


Figure2. Narrow Band

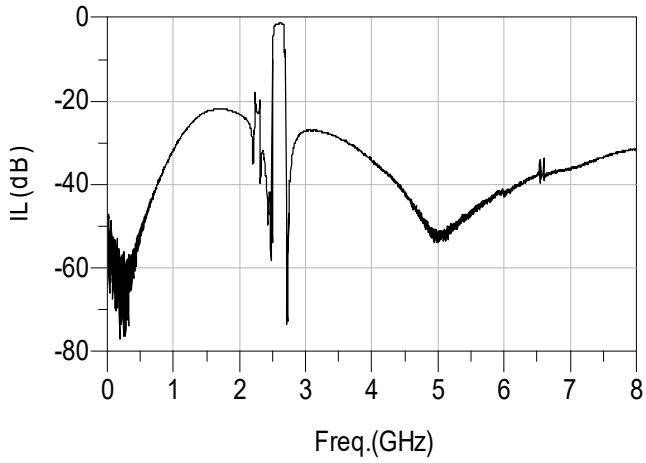


Figure3. Wide Band

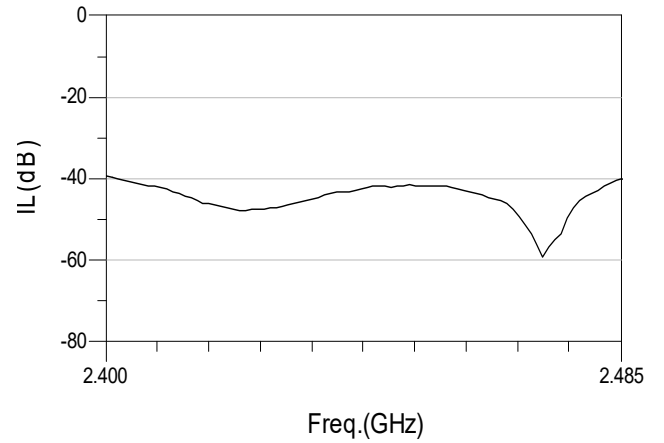


Figure4. Rejection in 2.4G Wi-Fi

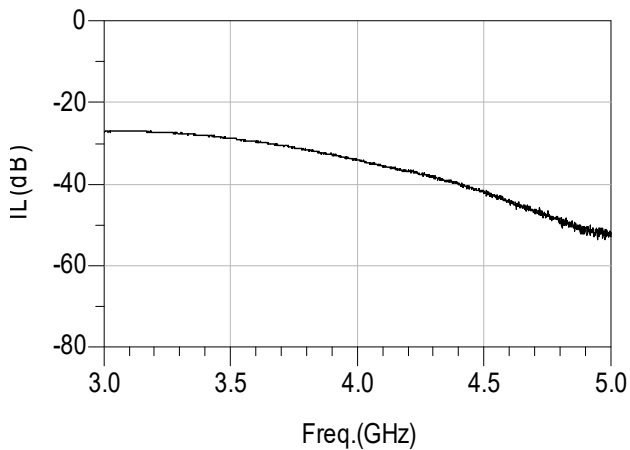


Figure5. Rejection in LTE5G

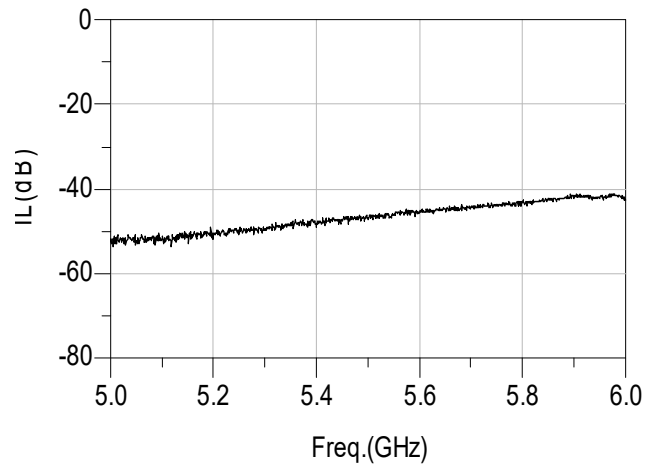
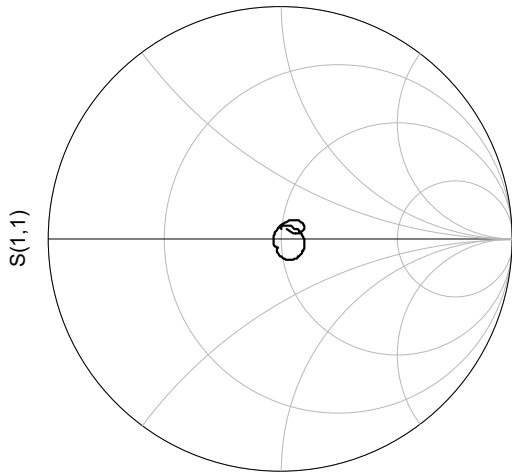


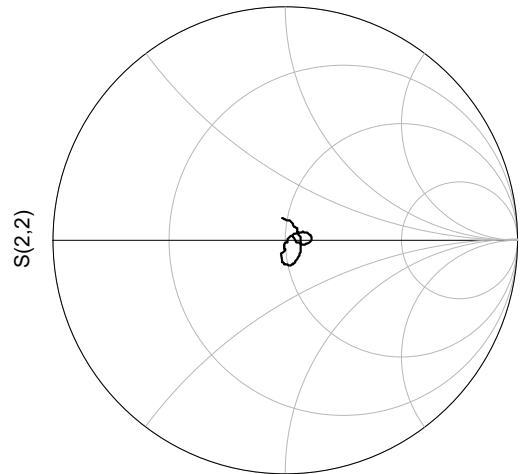
Figure6. Rejection in 5G Wi-Fi





freq (2.535GHz to 2.655GHz)

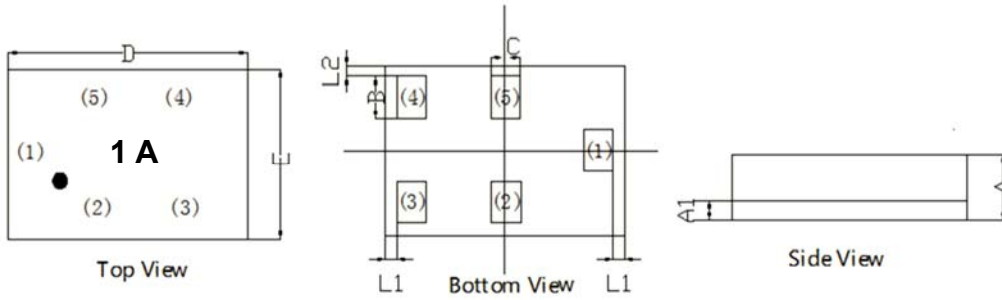
Figure7. S11



freq (2.535GHz to 2.655GHz)

Figure8. S22





Symbol	DIMENSION REQUIREMNET		
	MIN	NOM	MAX
A	0.55	0.60	0.65
A1	0.16	0.19	0.22
B	0.22	0.25	0.28
C	0.15	0.18	0.21
D	1.05	1.10	1.15
E	0.85	0.90	0.95
L1	0.075		
L2	0.075		

Note:

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

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

