

Description

YTLP2521E is a LTE Band 41 (2555~2675MHz) Tx/Rx bandpass filter designer for use in High Power User Equipment applications with a package size of only 1.1 x 0.9 mm.

YTLP2521E 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.

YTLP2521E uses chip scale packaging (CSP) technology to assembly the filters into a molded chip-on-board module.

Features

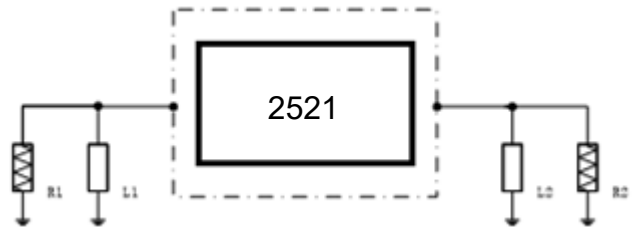
- Miniature Size
1.4mm x 1.1 mm x 0.59 mm
- Low insertion loss
 - Tx/Rx passband(2555-2675MHz): 1.4dB Typ.
- High Rejection in 2.4G Wi-Fi and 5G New Band
 - 2.4G Wi-Fi: 40dB Typ.
- HPUE: 32dBm, 55°C, 5000h
- Operation Temperature: -40 to +95°C
- Storage Temperature: -40 to +95°C

Environmental

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



Functional Block Diagram (Top View)



Reference Des.	Value	Description	
R1	50ohm		
R2	50ohm		
L1	5.1nH	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: -40 to +95℃)	Min	Typ*	Max	Unit
Insertion Loss (2555~2675MHz)	\	1.4	2.0	dB
Ripple (2555~2675MHz)	\	0.7	1.3	dB
VSWR (2555~2675MHz, Tx/Rx Port)	\	1.3	1.6	dB
VSWR (2555~2675MHz, Ant Port)	\	1.3	1.6	dB
Absolute Attenuation				
(10~699MHz)	37	41	\	dB
(699~916MHz)	30	34	\	dB
(916~1565MHz)	18	23	\	dB
(1565~1615MHz)	18	22	\	dB
(1615~1710MHz)	18	22	\	dB
(1710~1785MHz)	18	22	\	dB
(1805~1880MHz)	18	22	\	dB
(1880~1920MHz)	18	22	\	dB
(1920~1980MHz)	18	23	\	dB
(2110~2170MHz)	19	24	\	dB
(2300~2400MHz)	19	24	\	dB
(2401~2468MHz)	36	41	\	dB
(2451~2473MHz)	36	41	\	dB
(2456~2478MHz)	36	41	\	dB
(2461~2483MHz)	36	41	\	dB
(2760~2850MHz)	28	33	\	dB
(2850~3300MHz)	27	32	\	dB
(3300~4200MHz)	31	36	\	dB
(4400~4992MHz)	30	35	\	dB
(4992~5380MHz)	30	35	\	dB

Typical Performance at Tc=25℃



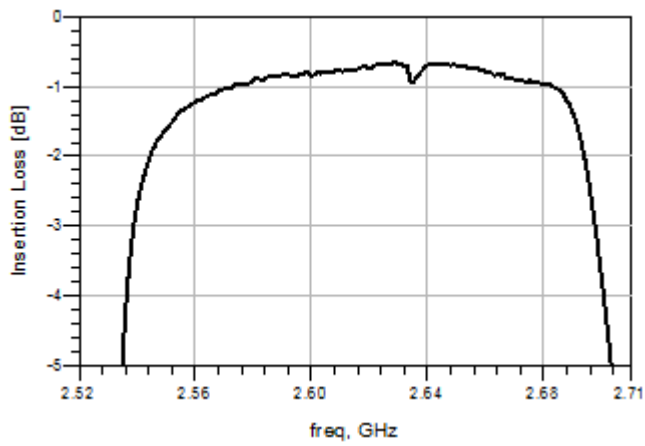


Figure1. Pass Band

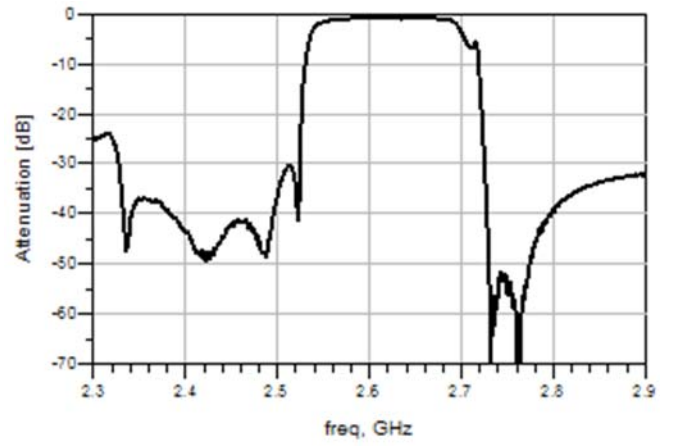


Figure2. Narrow Band

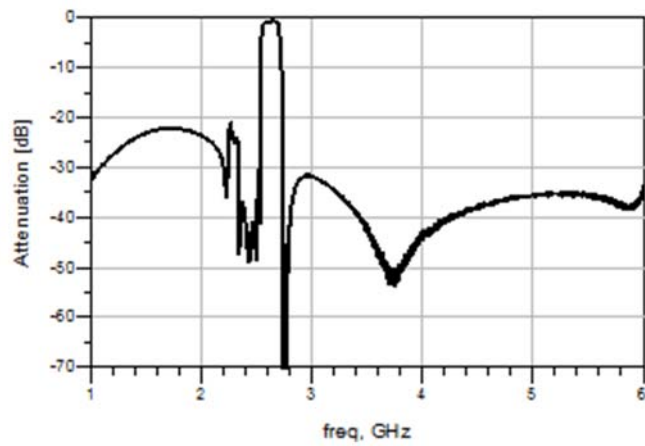


Figure3. Wide Band

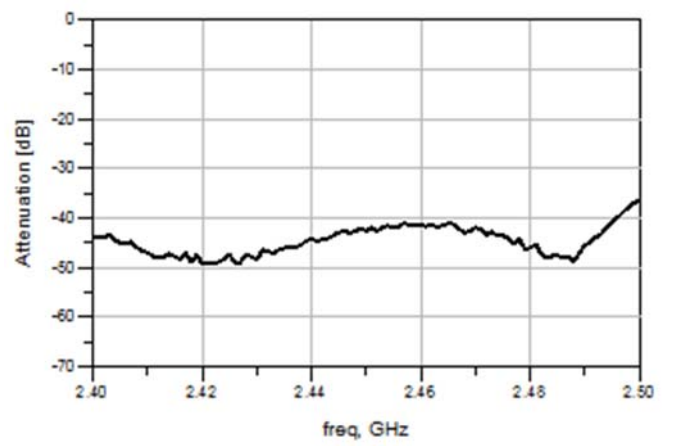


Figure4. Rejection in 2.4G Wi-Fi

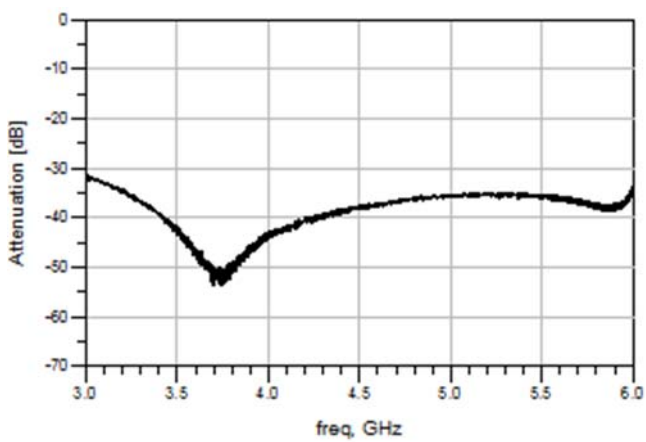


Figure5. Rejection in LTE5G & 5G Wi-Fi

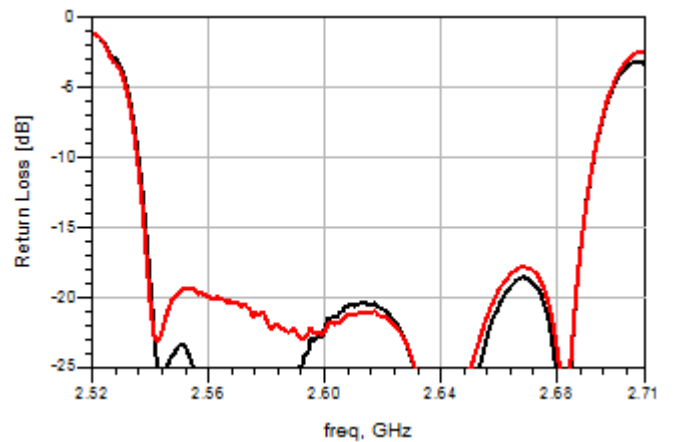
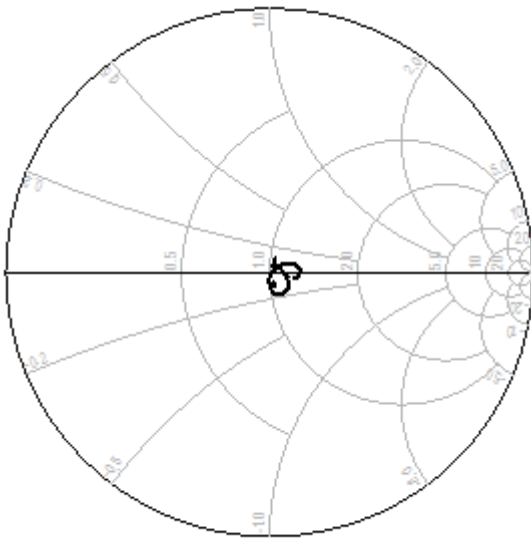
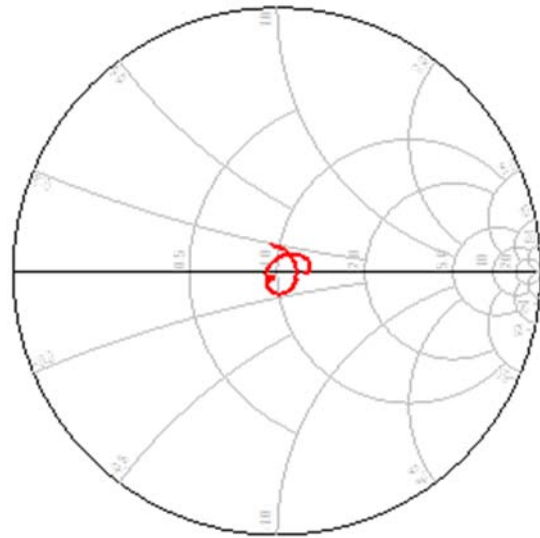


Figure6. Return Loss





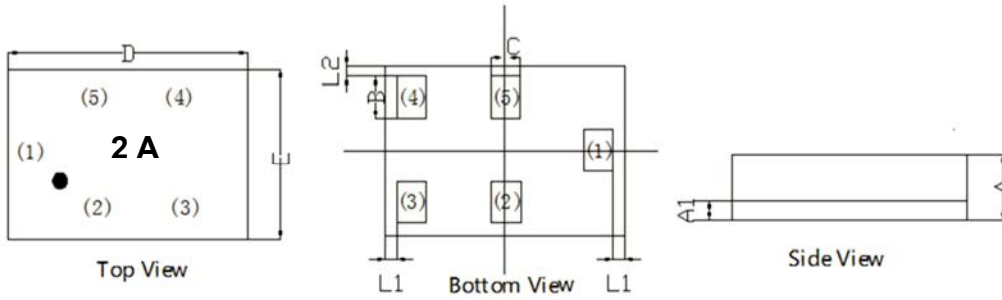
freq (2.555GHz to 2.675GHz)



freq (2.555GHz to 2.675GHz)

Figure7. Smith chart





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. 2A is product code.

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



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