

28 GHz Band Pass Filter



Overview

Fujikura's 28 GHz Band Pass Filter (BPF) based on Liquid crystal polymer (LCP) has a band pass function at 24.25-27.50 GHz or 26.50-29.50 GHz with 6th order canonical filter to block spurious emissions. It can suppress image spectrum and LO leakage, keeping unwanted emissions under -40 dBc.

Ultra-thin form factor as thickness of 0.3 mm incorporates 2 pieces of BPFs, which is convenient to connect to dual polarization Beamformer ICs.

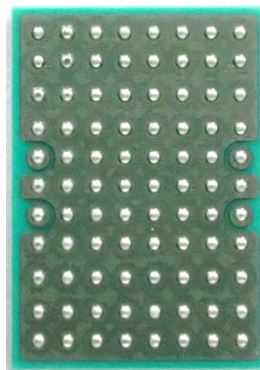
External View and Dimensions

Front view



Size: 6.4 mm x 4.4 mm

Back view



88 pin BGA
(Min. 0.5 mm pitch)

Side view

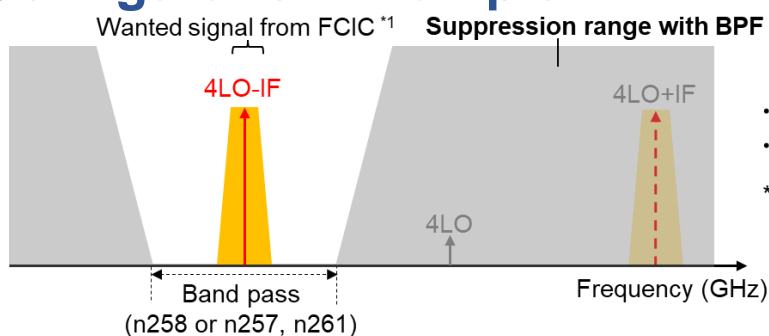


Thickness: 0.3 mm

Features

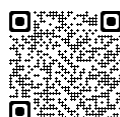
- Variants to support 5GNR bands: 24.25-27.50 GHz or 26.50-29.50 GHz
- 6th order canonical filter to block spurious emissions between Frequency converter IC and Beamformer ICs
- 2 BPFs inside
- Ultra-thin form factor as thickness of 0.3 mm
- LO leakage \leq -70 dBc with Frequency Converter IC (FCIC)^{*1} and BPF
- Sideband \leq -40 dBc with BPF

Configuration Example



- LO leakage \leq -70 dBc with FCIC^{*1} and BPF
- Sideband \leq -40 dBc with BPF

^{*1} :Fujikura's FCIC (FCPLP-F2N) supports 24.25-29.50 GHz (n257, n258, n261).



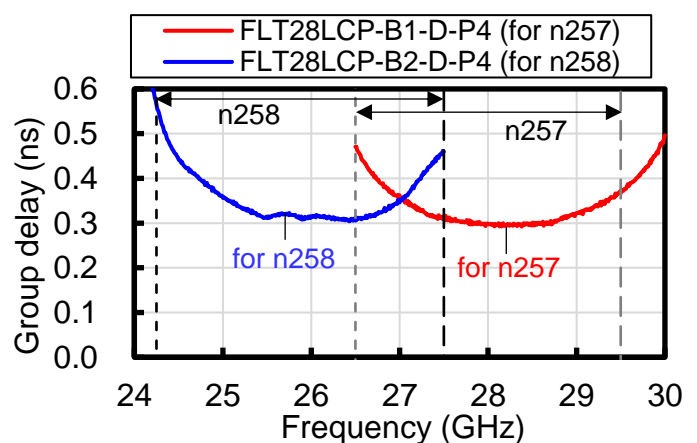
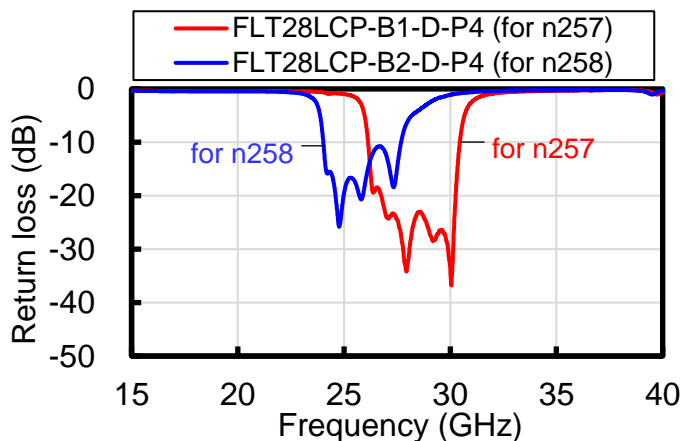
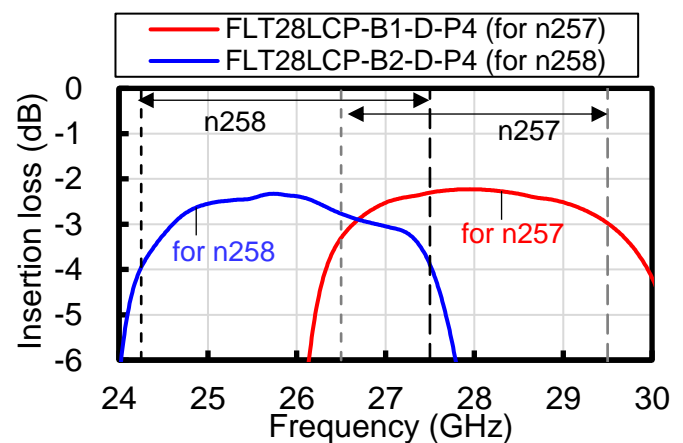
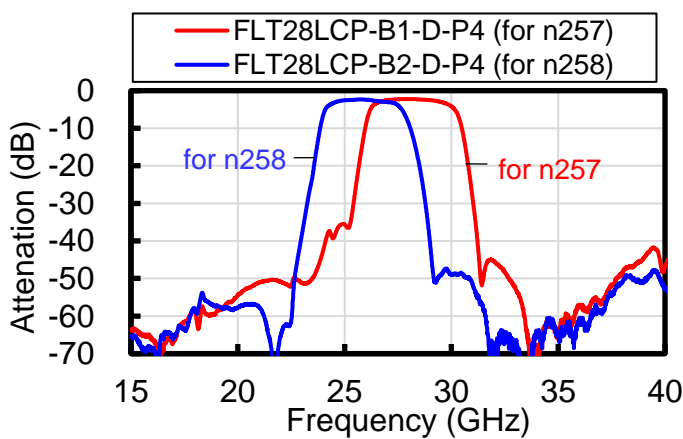
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Part number and Specification

Parameter	Typical values	
Part number	FLT28LCP-B2-D-P4	FLT28LCP-B1-D-P4
Frequency range (GHz)	24.25 to 27.50 (n258 supported)	26.50 to 29.50 (n257 supported)
Insertion Loss (dB)	-2.8	-2.5
Attenuation (dB) (Stop band)	≤ -40	≤ -40
	15.0-22.8 GHz 29.0-40.0 GHz	15.0-24.0 GHz 31.2-40.0 GHz
Group delay (ns)	0.36	0.33
Impedance (Ω)	50	

Frequency Response



Applications

- 5G NR Mobile Base Station
- Local 5G / Private 5G
- Fixed Wireless Access / Wireless Backhaul
- Repeater

Note;

- The values on the table shown above are preliminary, not guaranteed.
- Please refer to the PRODUCT WARRANTY (MW96-11-22-0044) for more detail.
- All contents in this brief are subject to change without any notice.

MW96-11-25-0009(2)