

# Technical proposal for JX-CF1-13.75G14.5G-30S1 Cavity Filter

◆ High Performance

◆ High Reliability

## Revision History

Version	Date	Author	Revision description	Comment
V1.0	2018/11/20	Lee	Created	/
V1.1	2020/08/05	Lee	Updated the mechanical layout	JingXin request

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## 1. Mechanical layout

Table 1 Mechanical specifications @ JX-CF1-13.75G14.5G-30S1

Dimension	L x W x H: 88.2mm x 18.5mm (Max) x 10.2mm
Port connectors	SMA-Female / SMA-Male
Finish	Silver
Notes	Material shall be RoHS 6/6

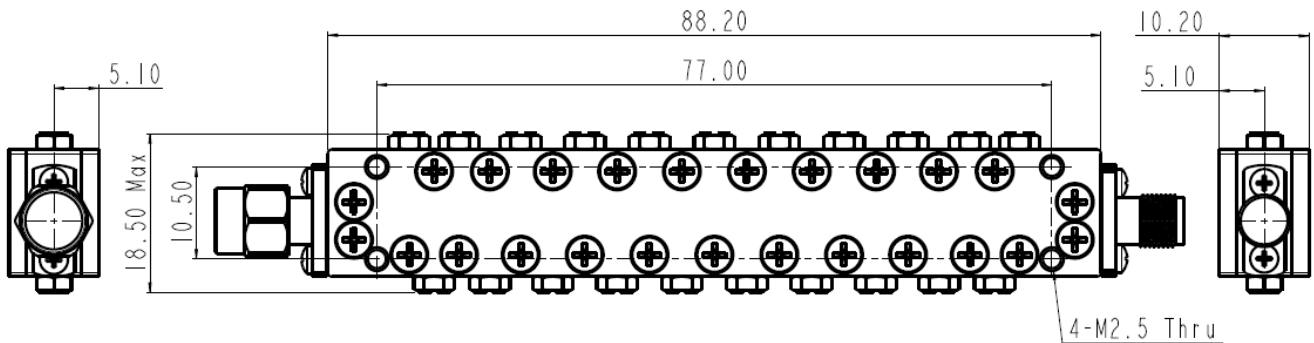


Figure 1 JX-CF1-13.75G14.5G-30S1 front panel layout

## 2. Electrical analysis

### 2.1 Electrical specifications

Table 2 Electrical specifications @ JX-CF1-13.75G14.5G-30S1

Item	Parameter	Specifications
1	Frequency band	13750-14500MHz
2	Return loss	≥18dB
3	Insertion loss	≤1.5dB
4	Insertion loss variation	≤0.4dB peak-peak in any 80MHz interval within signal bw ≤1.0dB peak-peak within signal bw
5	Rejection	≥70dB @ DC-12800MHz ≥30dB @ 14700-15450MHz ≥70dB @ 15450MHz
6	Group delay variation	≤1ns peak-peak in any 80 MHz interval within signal bw
7	Impedance	50 Ohm
8	Temperature range	-30°C to +70°C

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2.2 The simulation curve

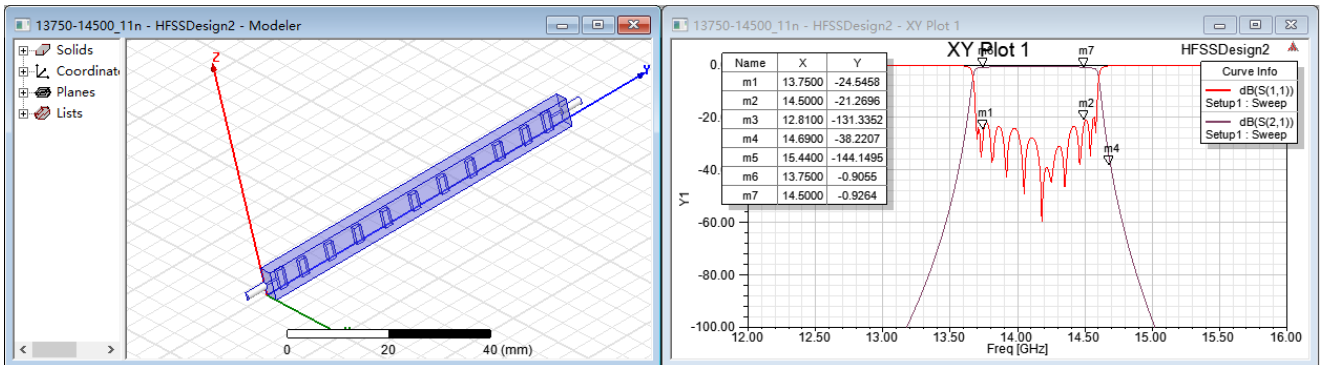


Figure 2 The simulation curve of the 3D model

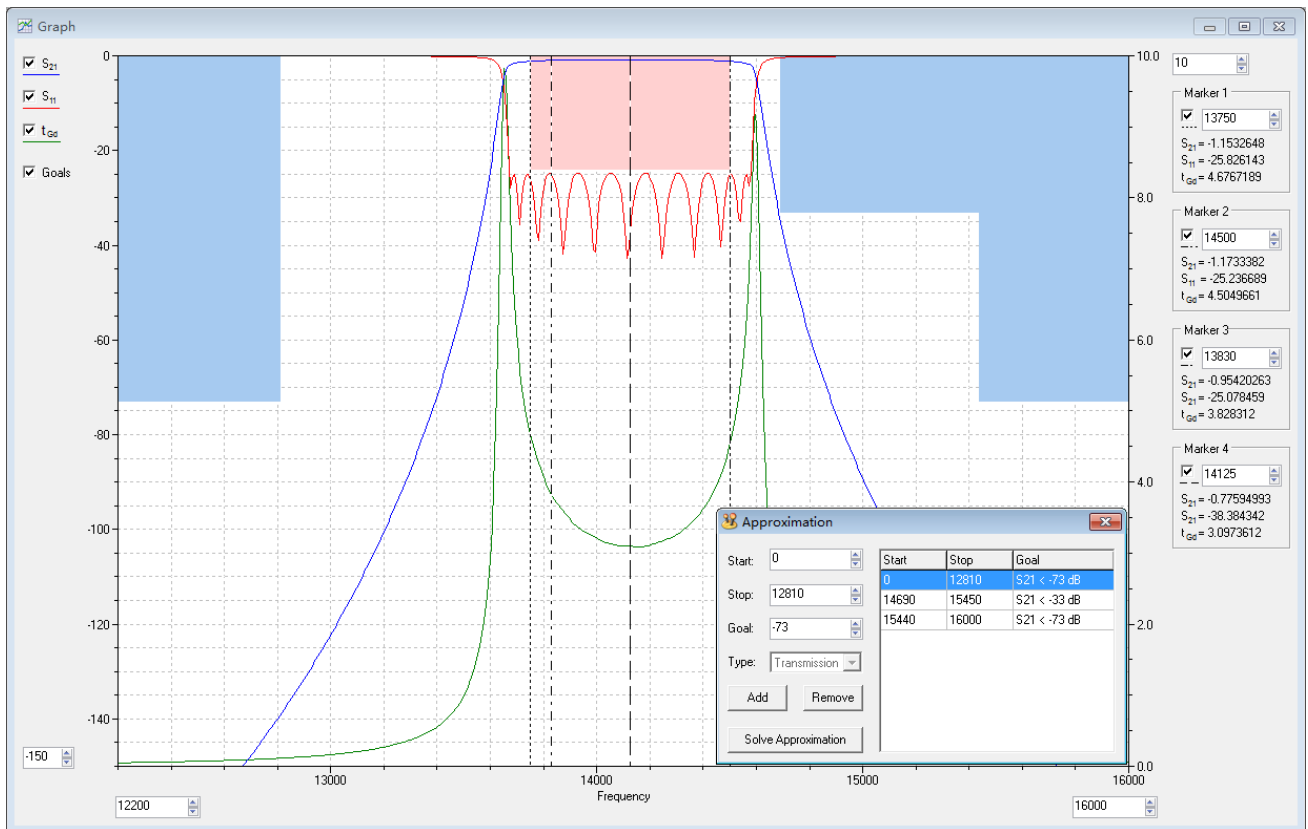


Figure 3 The simulation curve of the circuit

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