

Technical proposal for JX-CD2-5150M5875M-80NS Cavity Duplexer

- ◆ Low Insertion Loss
- ◆ High Rejection
- ◆ Small Volume
- ◆ High Reliability

Revision History

Version	Date	Author	Revision description	Comment
V1.0	2020/09/15	Sam Chen	Created	/
V1.1	2020/09/16	Sam Chen	Update power	10W to 50W
V1.2	2020/09/30	Sam Chen	Change connector position	/
V1.3	2020/10/01	Sam Chen	Update port identification	Customer suggestion

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1. Mechanical layout

Table 1 Mechanical specifications @ JX-CD2-5150M5875M-80NS

Dimension	LxWxH: 112mm x 92mm x 27mm
Port connectors	ANT:N-Female; LO/HI:SMA-Female
Finish	Ct.Ocd
Notes	Material shall be RoHS 6/6

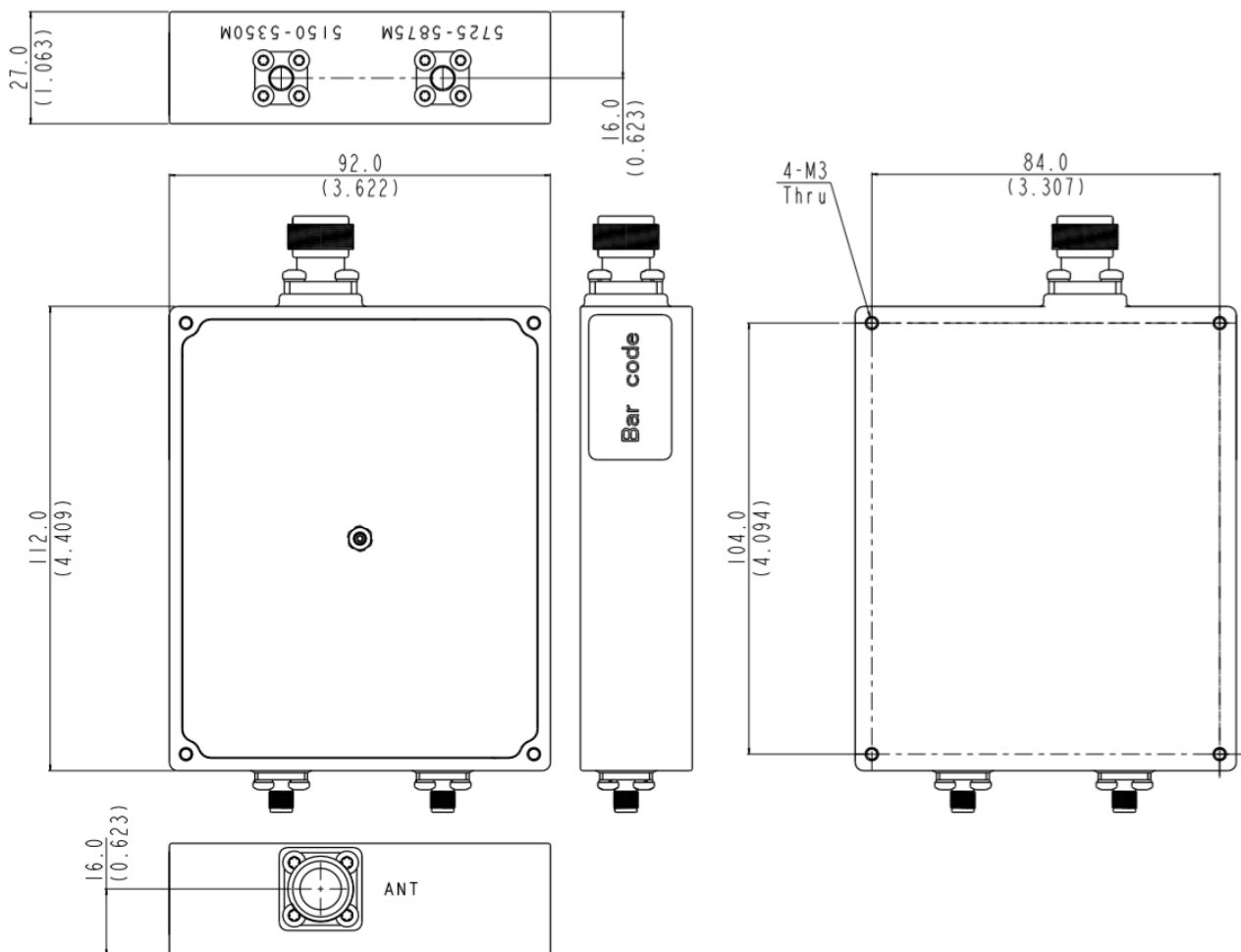


Figure 1 JX-CD2-5150M5875M-80NS front panel layout

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2. Electrical analysis

2.1 Schematic diagram of the Duplexer

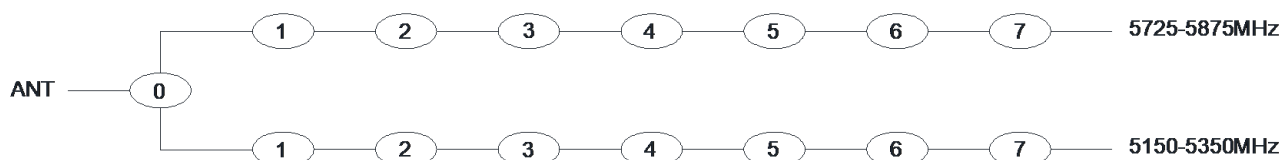


Figure 2 Toplogy of the Duplexer

2.2 Electrical specifications

Table 2 Electrical specifications @ JX-CD2-5150M5875M-80NS

Item	Parameter	LO	HI
1	Frequency Range	5150-5350 MHz	5725-5875 MHz
2	Return loss	≥18 dB	≥18 dB
3	Insertion loss	≤1.8 dB	≤1.8 dB
4	Rejection	≥40dB@3000-5080MHz ≥80dB@5720-5875MHz	≥40dB@5350-5660MHz ≥80dB@5150-5350MHz ≥55dB@5980-6500MHz
5	Isolation	≥80dB@5150-5350MHz&5725-5875MHz	
6	Power	Average:50W	
7	Temperature Range	-40°C to +60°C	
8	DC signal isolation	ANT port	
9	Impedance	50 Ω	

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2.3 The simulation curve

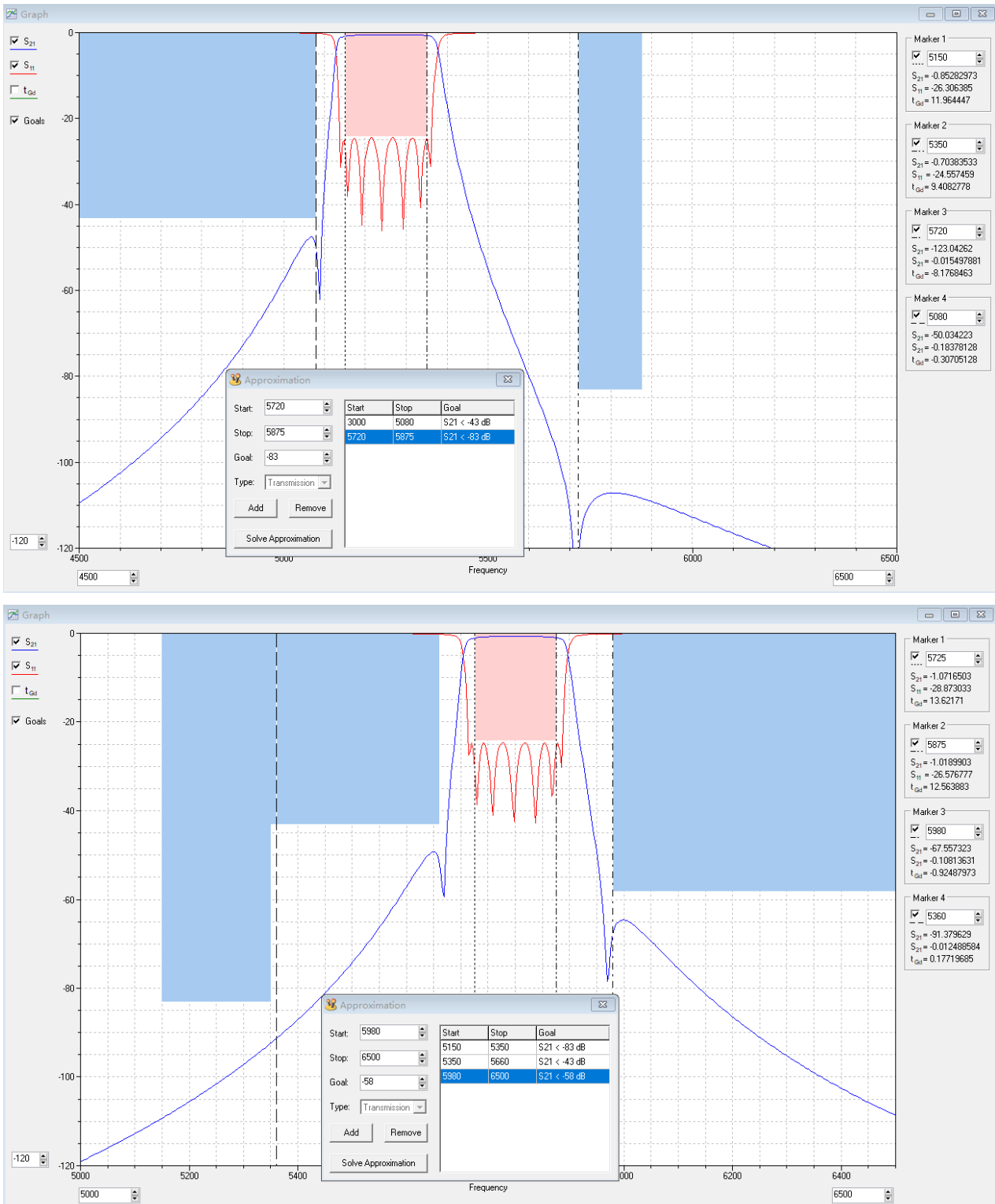


Figure 3 The simulation curve of the Duplexer

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