

Technical proposal for JX-CD2-410M427M-80S Cavity Duplexer

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

Revision History

Version	Date	Author	Revision description	Comment
V1.0	2020/05/06	Sam Chen	Created	/

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1. Mechanical layout

Table 1 Mechanical specifications @ JX-CD2-410M427M-80S

Dimension	LxWxH: 210mm x 210mm x 69mm (75.0mm Max)
Port connectors	SMA-Female
Finish	Silver
Notes	Material shall be RoHS 6/6

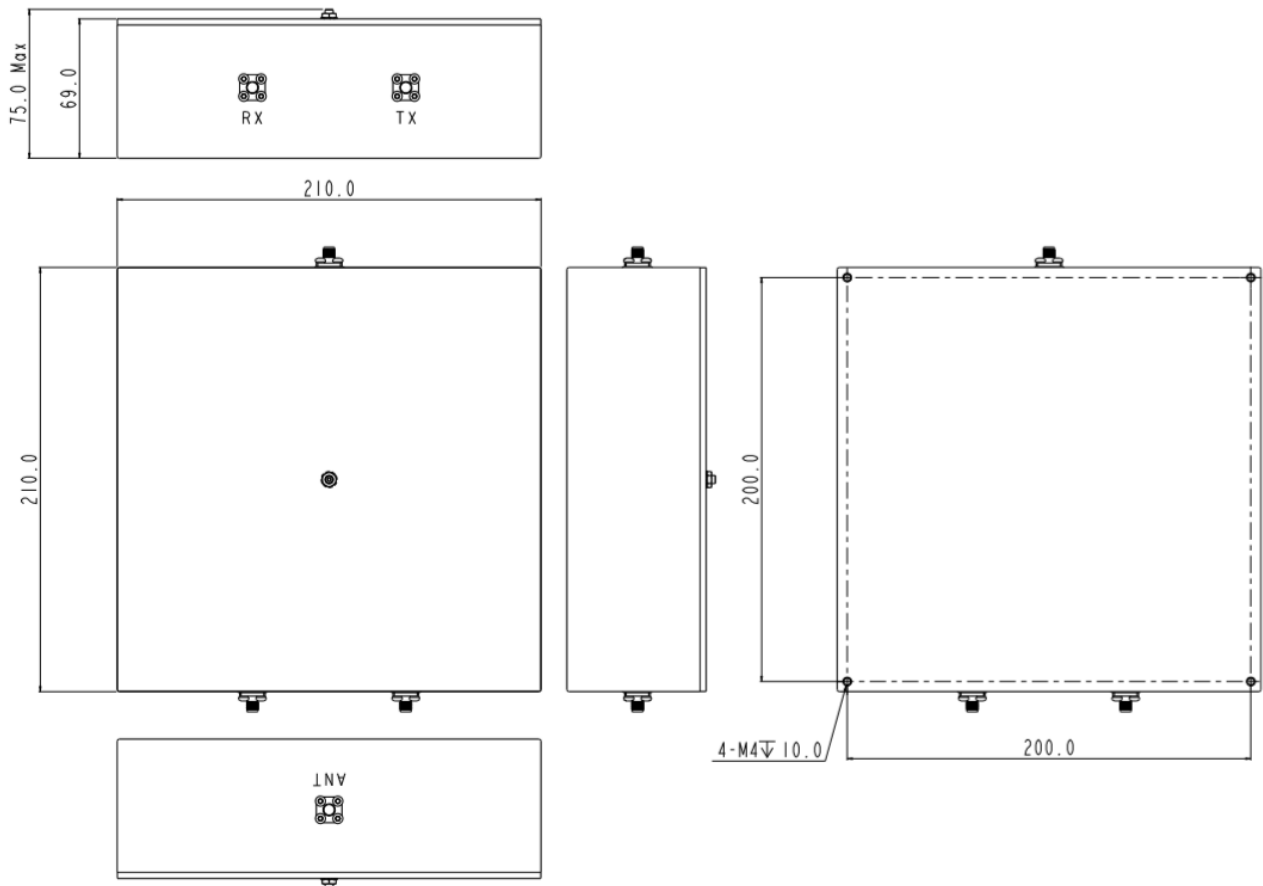


Figure 1 JX-CD2-410M427M-80S front panel layout

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2. Electrical analysis

2.1 Schematic diagram of the Duplexer

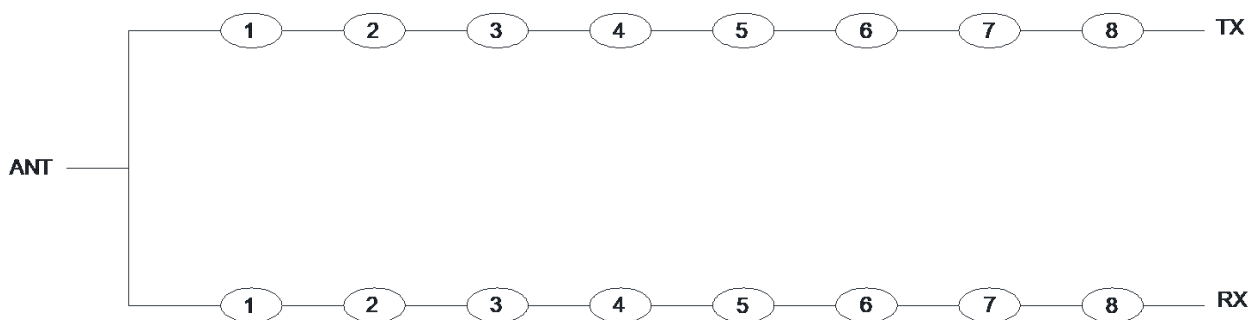


Figure 2 Toplogy of the Duplexer

2.2 Electrical specifications

Table 2 Electrical specifications @ JX-CD2-410M427M-80S

Item	Parameter	RX	TX
1	Frequency range	410-417 MHz	420-427 MHz
2	Return loss (Normal Temp)	≥20 dB	≥20 dB
	Return loss (Full Temp)	≥18 dB	≥18 dB
3	Insertion loss(Normal Temp)	≤1.7 dB	≤1.7 dB
	Insertion loss(Full Temp)	≤1.9 dB	≤1.9 dB
4	Ripple (Normal Temp)	≤0.8 dB	≤0.8 dB
	Ripple (Full Temp)	≤1.0 dB	≤1.0 dB
5	Rejection (Full Temp)	≥80 dB@420-427 MHz	≥80 dB@410-417 MHz
6	Power	200 W	
7	Temperature Range	-40°C to +85°C	
8	Impedance	50 Ω	

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2.3 The simulation curve

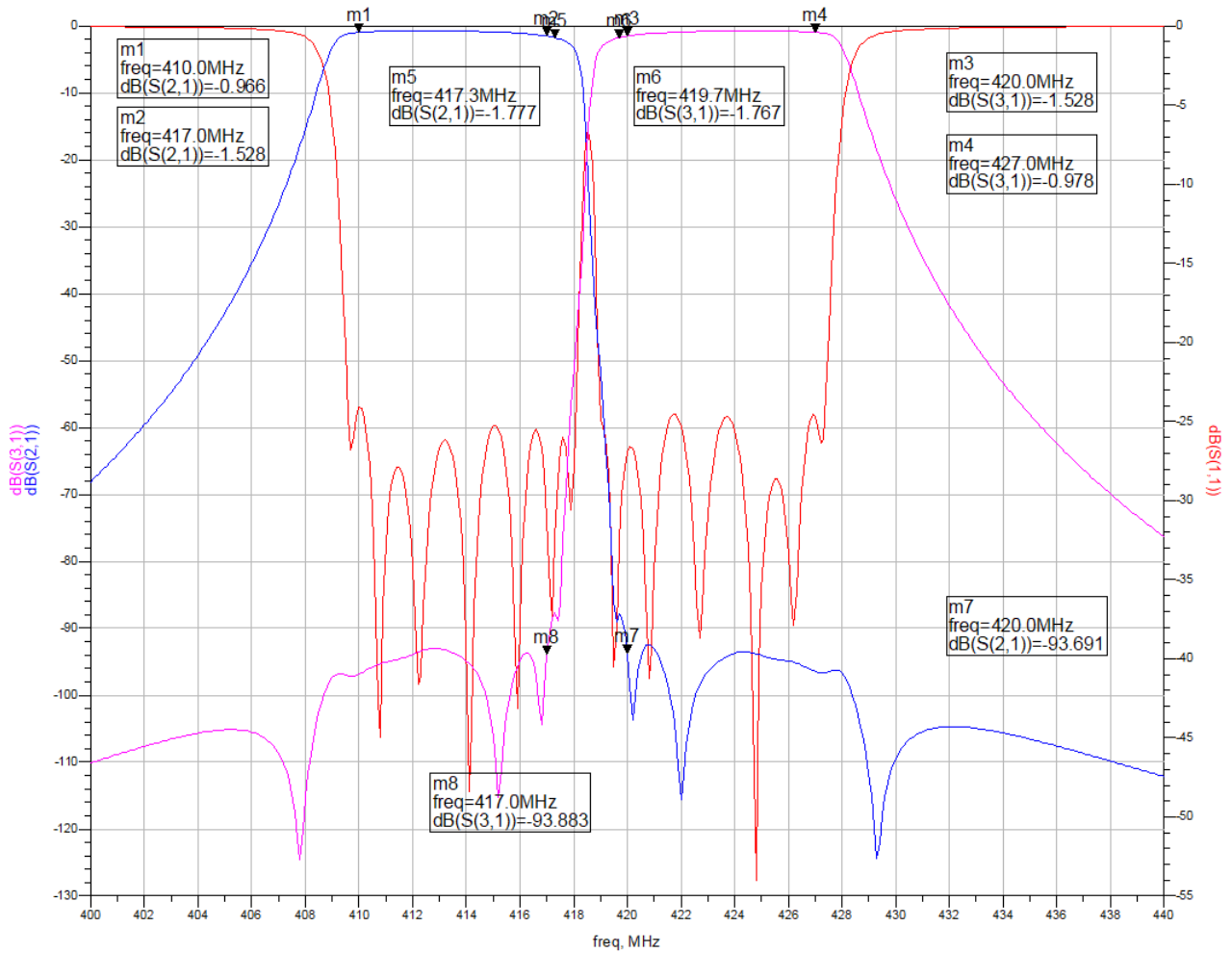


Figure 3 The simulation curve of the Duplexer

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