

# Technical Proposal for JX-CD2-R09-45N Cavity Duplexer

- ◆ Low PIM
- ◆ High Isolation
- ◆ High Reliability

## Revision History

Version	Date	Author	Revision description	Comment
V1.0	2018/11/12	Lee	Created	/

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## 1. Mechanical layout

Table 1 Mechanical Specifications @ JX-CD2-R09-45N

Dimension	LxWxH: 210mm x 76mm x 25mm (Max 31mm)
Port connectors	N-Female
Finish	Silver
Material	In door use
Notes	Material shall be RoHS 6/6

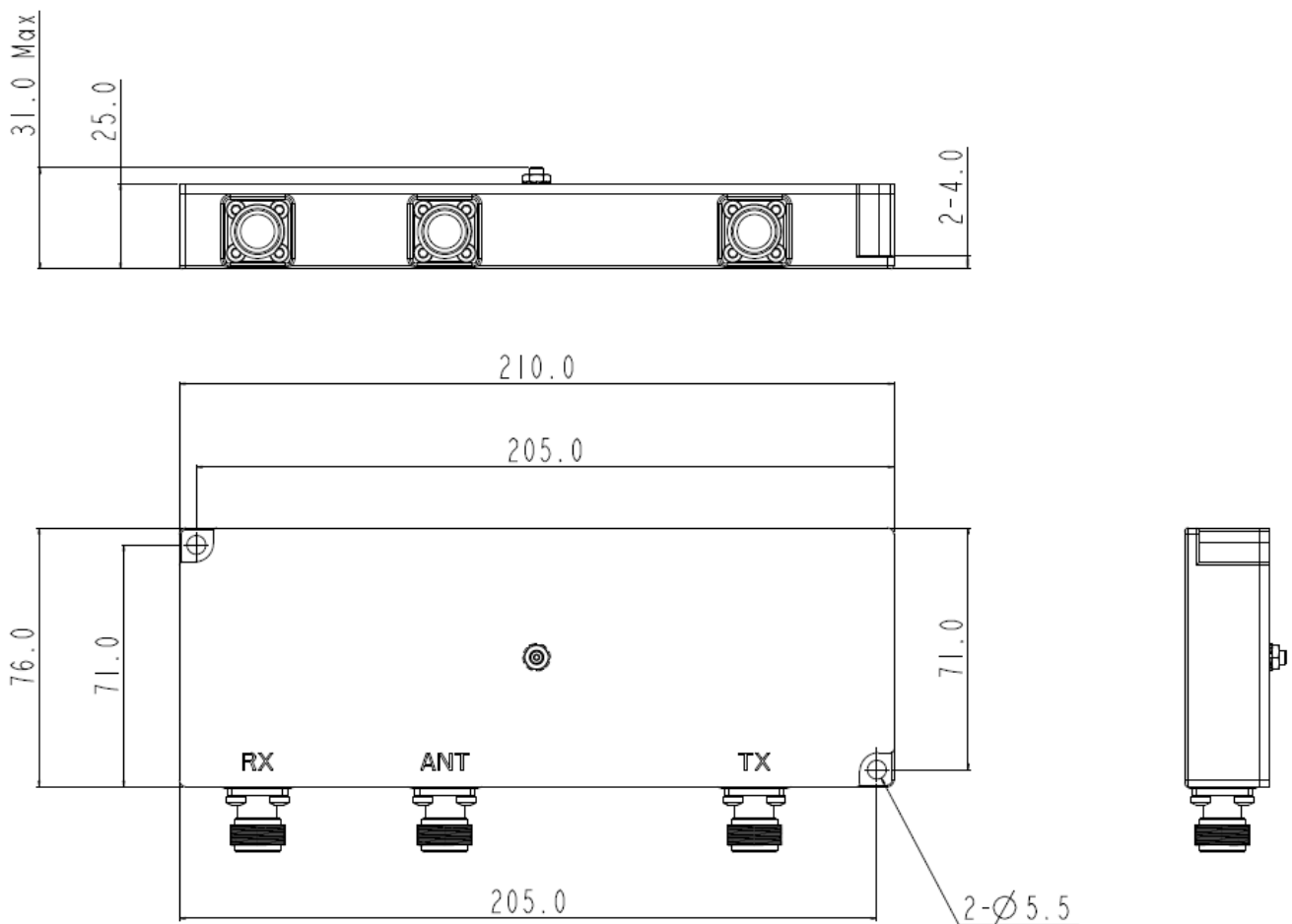


Figure 1 JX-CD2-R09-45N front panel layout

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## 2. Electrical analysis

### 2.1 Schematic diagram of the duplexer

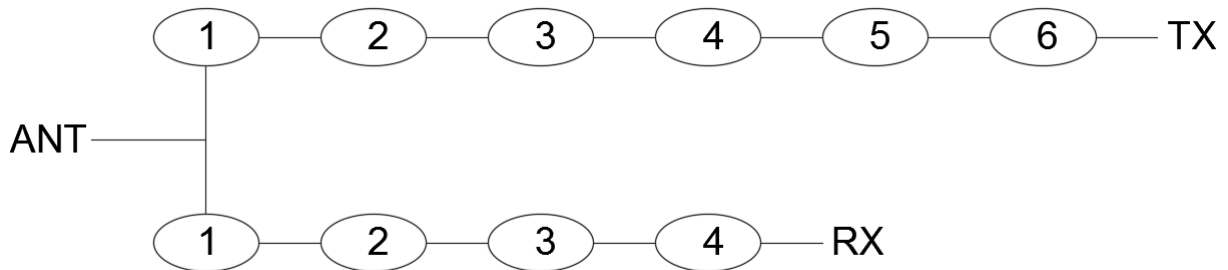


Figure 2 Topology of the duplexer

### 2.2 Electrical specifications

Table 2 Electrical specifications @ JX-CD2-R09-45N

Item	Parameter	RX	TX
1	Frequency range	873-880MHz	918-925MHz
2	Return loss	≥15dB	≥15dB
3	Insertion loss	≤2.7dB	≤2.7dB
4	Ripple	≤1.5dB	≤1.5dB
5	Attenuation	≥30dB@60-522MHz ≥50dB@477-732MHz ≥45dB@791-821MHz ≥81dB@918-925MHz ≥50dB@1022-1277MHz	≥35dB@433-434MHz ≥50dB@522-777MHz ≥35dB@863-870MHz ≥83dB@873-880MHz ≥45dB@880-915MHz ≥50dB@1067-1322MHz ≥25dB@1277-2700MHz
6	Isolation	≥40dB@873-925MHz	
7	Power	50W	
8	Impedance	50Ohm	
9	Operating temperature range	-25°C to +55°C	

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2.3 The simulation curve

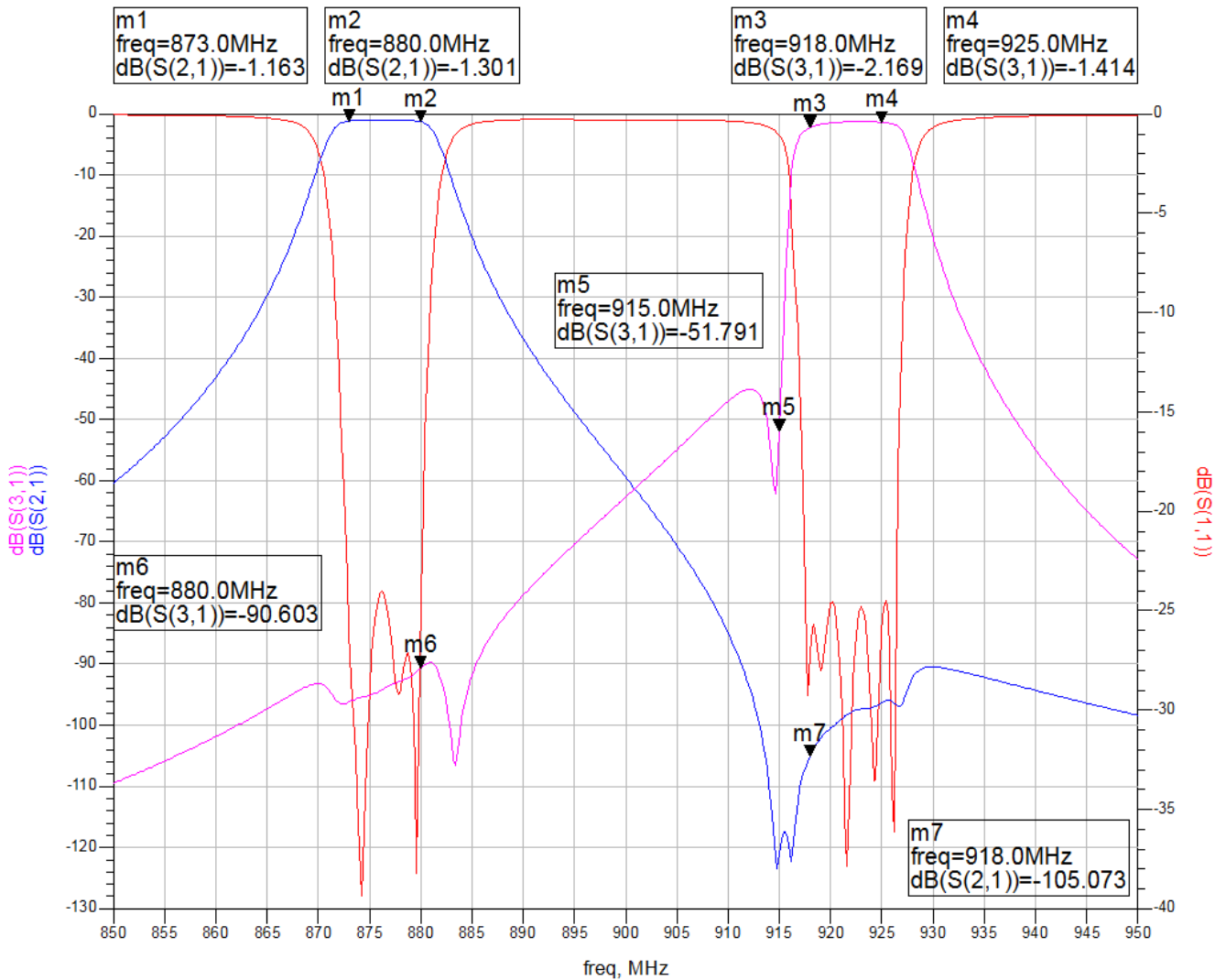


Figure 3 The simulation curve of the duplexer

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