

Technical proposal for JX-CC6-758M2690M-DL55 Cavity Combiner

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

Revision History

Version	Date	Author	Revision description	Comment
V1.0	2020/05/21	Lee	Created	/
V1.1	2020/06/08	Lee	Updated the mechanical layout	Customer request

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1. Mechanical layout

Table 1 Mechanical specification @ JX-CC6-758M2690M-DL55

Dimension	LxWxH: 260mm x 181.7mm x 36mm (41.0mm Max)
Input connectors	SMA-Female
COM conector	N-Female
Thread size & Hole callout info	Front: 8-M3 deep 8.0mm Bottom: 4-M4 deep 10.0mm
Weight	≤1.8kg
Finish	Black (Paint spraying)
Notes	Material shall be RoHS 6/6

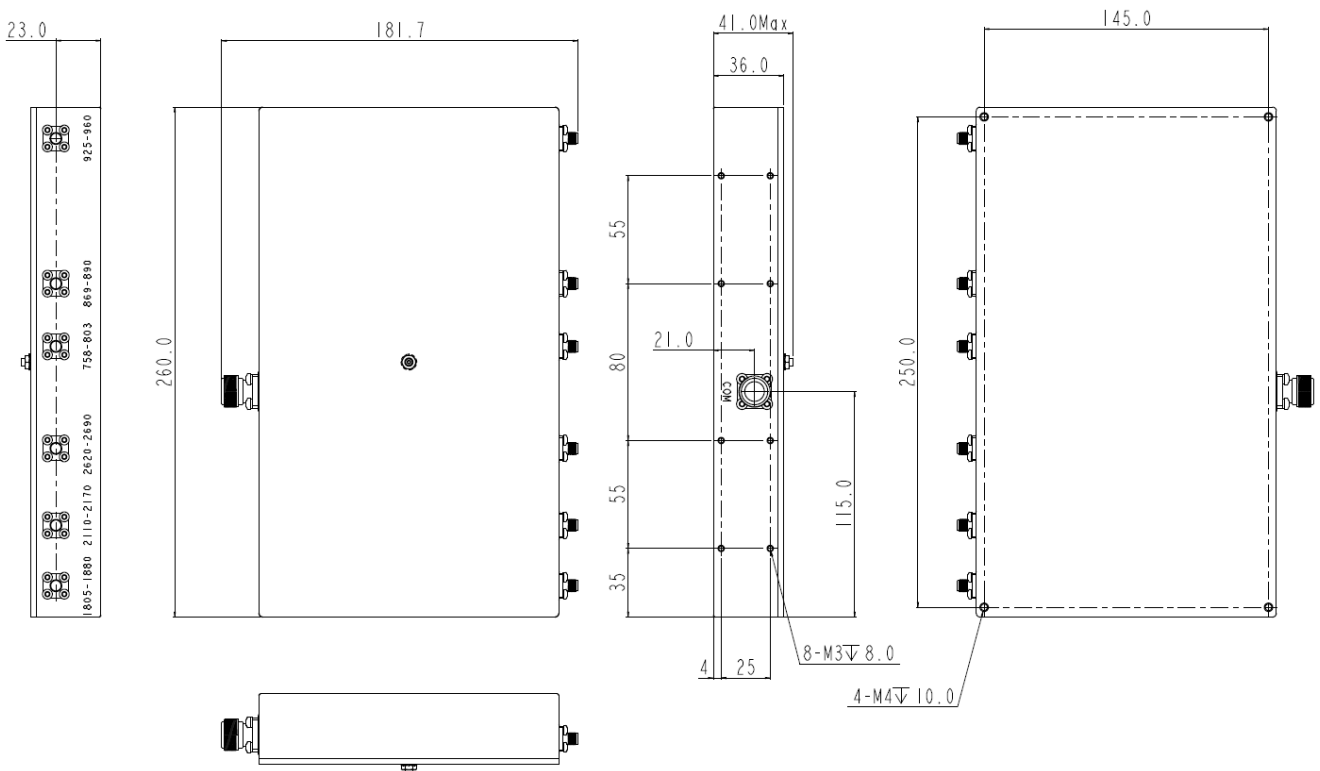


Figure 1 JX-CC6-758M2690M-DL55 front panel layout

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2. Electrical analysis

2.1 Schematic diagram of the combiner

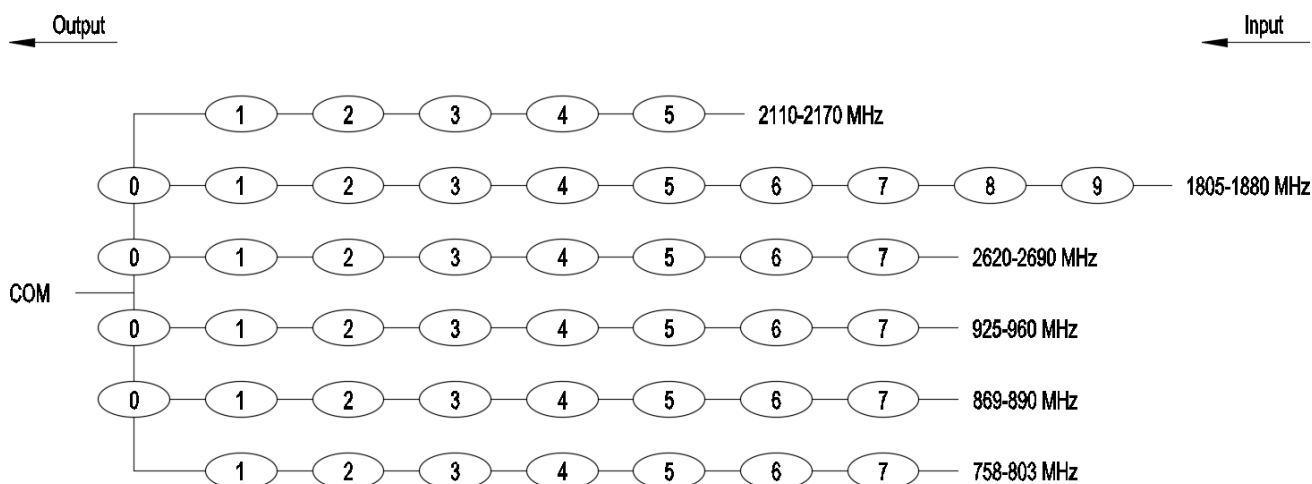


Figure 2 Topology of the combiner

2.2 Electrical specification

Table 2 Electrical specification @ JX-CC6-758M2690M-DL55

Item	Parameter	Specifications					
		758-803 MHz	869-890 MHz	925-960M Hz	1805-1880 MHz	2110-2170 MHz	2620-2690 MHz
1	Frequency range	758-803 MHz	869-890 MHz	925-960M Hz	1805-1880 MHz	2110-2170 MHz	2620-2690 MHz
2	Center frequency	780.5M Hz	879.5M Hz	942.5MHz	1842.5MHz	2140MHz	2655MHz
3	Return loss	≥18dB	≥18dB	≥18dB	≥18dB	≥18dB	≥18dB
4	Center frequency insertion loss(Normal temp)	≤0.6dB	≤1.0dB	≤0.6dB	≤0.6dB	≤0.6dB	≤0.6dB
	Center frequency insertion loss(Full temp)	≤0.65dB	≤1.0dB	≤0.65dB	≤0.65dB	≤0.65dB	≤0.65dB
5	Insertion loss in bands	≤1.5dB	≤1.7dB	≤1.5dB	≤1.5dB	≤1.5dB	≤1.5dB
6	Ripple in bands	≤1.0dB	≤1.0dB	≤1.0dB	≤1.0dB	≤1.0dB	≤1.0dB
7	Rejection at all stop bands	≥50dB	≥55dB	≥50dB	≥50dB	≥50dB	≥50dB
8	Stop band ranges	703-748MHz & 824-849MHz & 896-915MHz & 1710-1785MHz & 1920-1980MHz & 2500-2570MHz & 2300-2400MHz & 3550-3700MHz					
9	Input power	≤80W Average handling power at every input port					
10	Output power	≤300W Average handling power at COM port					
11	Impedance	50 Ω					
12	Temperature range	-40°C to +85°C					

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2.3 The simulation curve

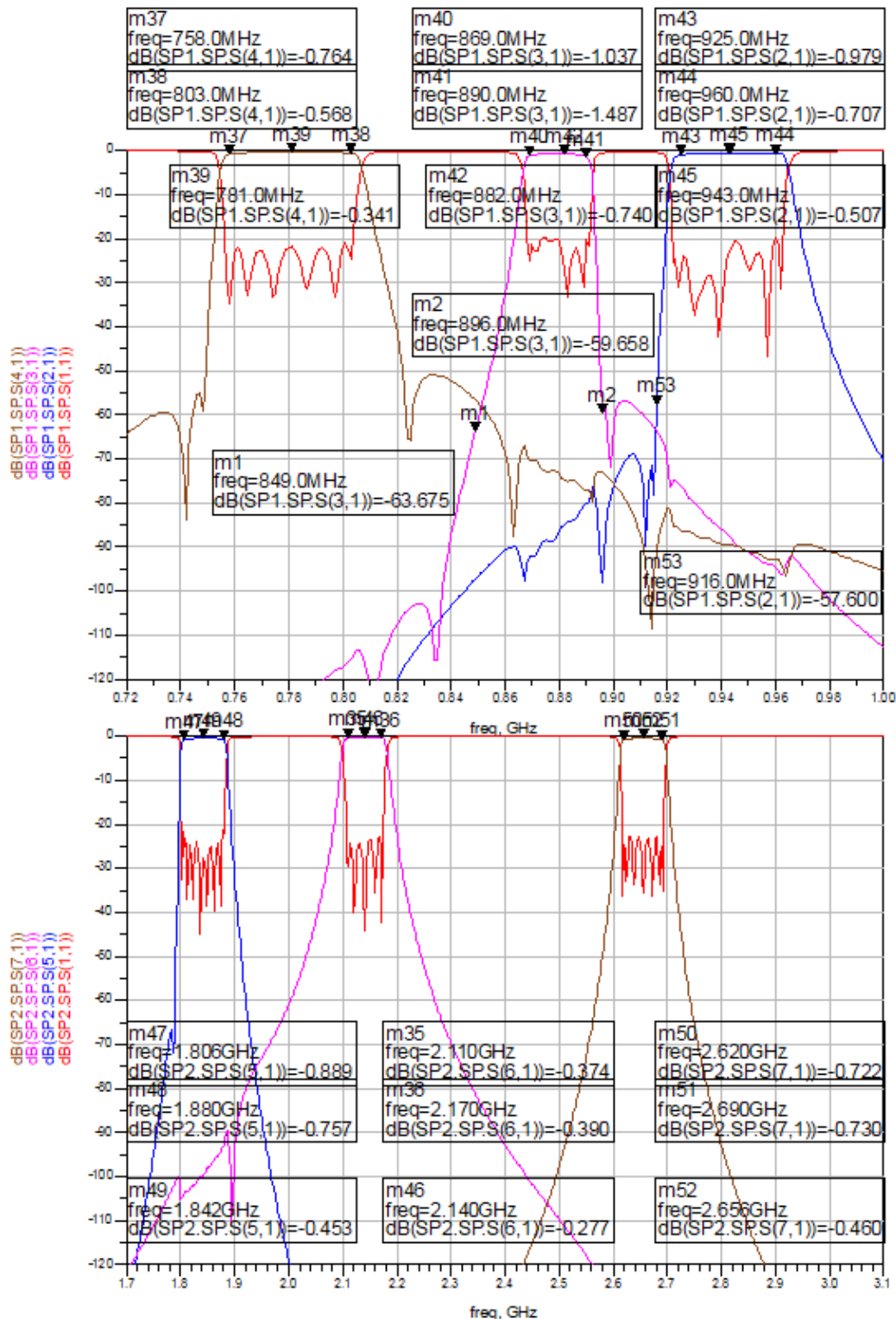


Figure 3 The simulation curve of the combiner

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