

Technical proposal for JX-CC5-758M2690M-70NSDL2 Cavity Combiner

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

Revision History

Version	Date	Author	Revision description	Comment
V1.0	2020/11/11	Lin liqun	Created	/

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1. Mechanical layout

Table 1 Mechanical specifications @ JX-CC5-758M2690M-70NSDL2

Dimension	LxWxH: 260mm x 182mm x 36mm (41.0mm Max)
Input connectors	SMA-Female
COM connector	N-Female
Thread size & Hole callout info	Front: 8-M3 deep 8.0mm Bottom: 4-M4 deep 10.0mm
Finish	Black (Paint spraying)
Weight	≤1.7kg
Notes	Material shall be RoHS 6/6

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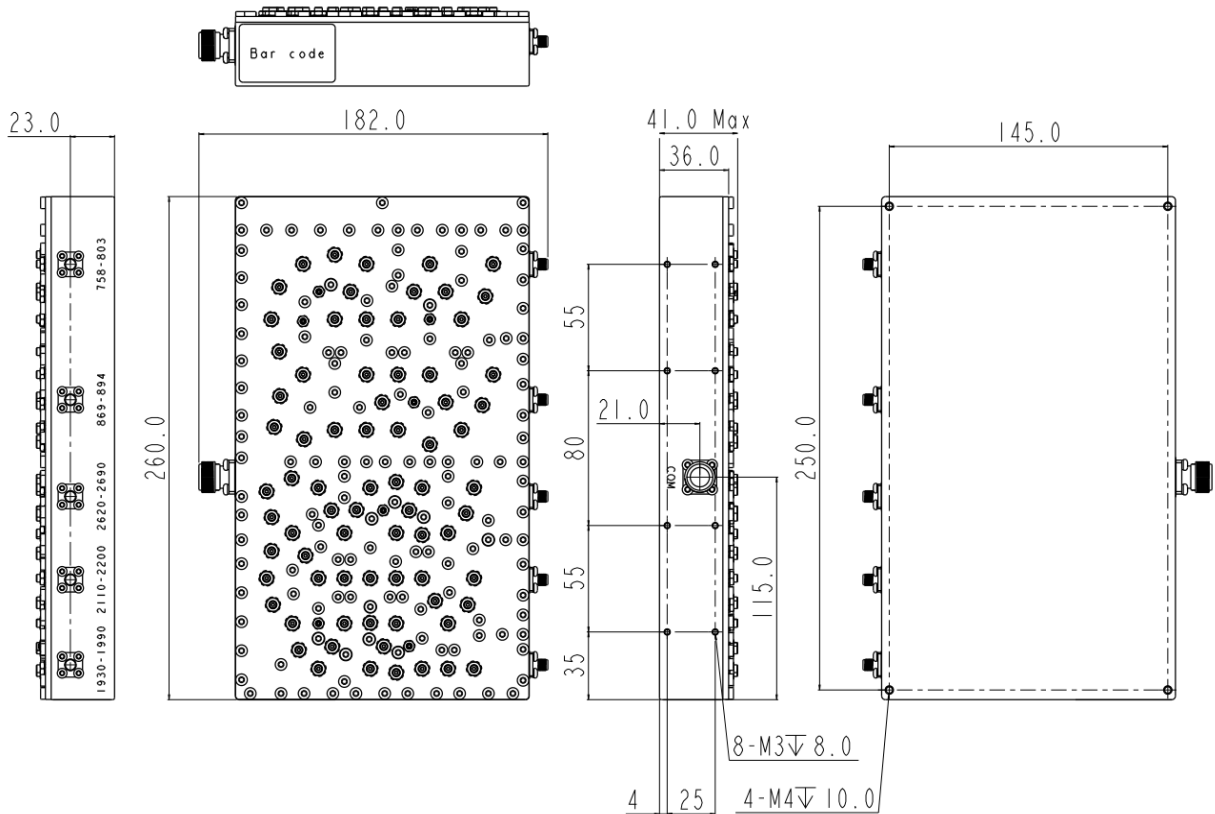


Figure 1 JX-CC5-758M2690M-70NSDL2 front panel layout

2. Electrical analysis

2.1 Schematic diagram of the combiner

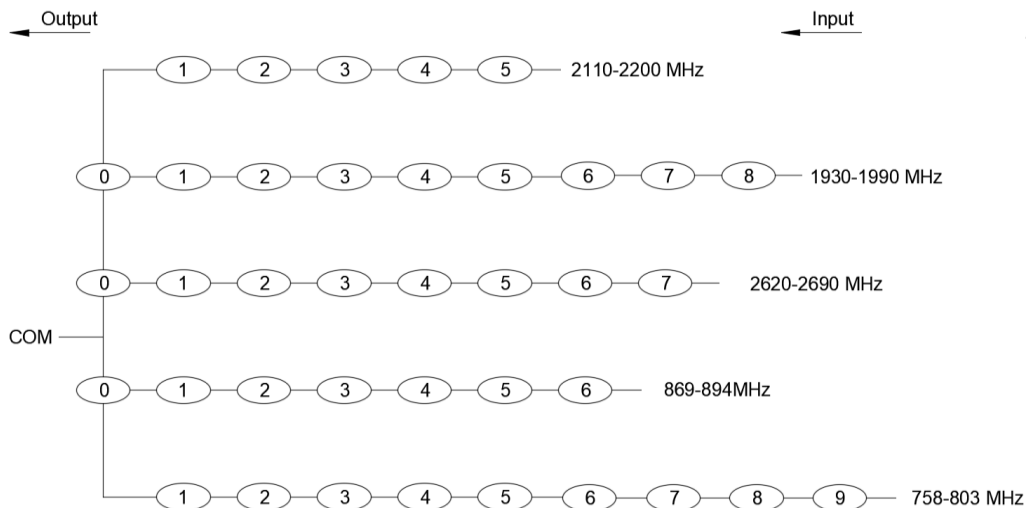


Figure 2 Topology of the combiner

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2.2 Electrical specifications

Table 2 Electrical specifications @ JX-CC5-758M2690M-70NSDL2

Item	Parameter	Specifications				
		758-803MHz	869-894MHz	1930-1990M Hz	2110-2200M Hz	2620-2690 MHz
1	Frequency range	758-803MHz	869-894MHz	1930-1990M Hz	2110-2200M Hz	2620-2690 MHz
2	Center frequency	780.5MHz	881.5MHz	1960MHz	2155MHz	2655MHz
3	Return loss	≥18dB	≥18dB	≥18dB	≥18dB	≥18dB
4	Center frequency insertion loss(Normal temp)	≤0.6dB	≤0.6dB	≤0.6dB	≤0.5dB	≤0.6dB
	Center frequency insertion loss(Full temp)	≤0.65dB	≤0.65dB	≤0.65dB	≤0.5dB	≤0.65dB
5	Insertion loss (Normal temp)	≤1.3dB	≤1.2dB	≤1.3dB	≤1.2dB	≤1.2dB
	Insertion loss (Full temp)	≤1.3dB	≤1.2dB	≤1.6dB	≤1.2dB	≤1.2dB
6	Ripple (Normal temp)	≤0.9dB	≤0.7dB	≤0.7dB	≤0.7dB	≤0.7dB
	Ripple (Full temp)	≤1.0dB	≤0.7dB	≤1.3dB	≤0.7dB	≤0.8dB
7	Rejection	≥40dB@DC-700 MHz	≥40dB@DC-700 MH	≥40dB@DC-700 MHz	≥40dB@DC-700 MHz	≥40dB@DC-700MHz
		≥75dB@703-74 8MHz	≥70dB@703-74 8MHz	≥70dB@703-74 8MHz	≥70dB@703-74 8MHz	≥70dB@703-748MHz
		≥70dB@824-84 9MHz	≥75dB@ 824-849MHz	≥70dB@824-84 9MHz	≥70dB@824-84 9MHz	≥70dB@824-849MHz
		≥70dB@1850-1 910MHz	≥70dB@1850-1 910MHz	≥75dB@1850-1 910MHz	≥75dB@1850-1 910MHz	≥70dB@1850-1910MHz
		≥70dB@1710-1 770MHz	≥70dB@1710-1 770MHz	≥75dB@1710-1 770MHz	≥75dB@1710-1 770MHz	≥70dB@1710-1770MHz
		≥70dB@2500-2 570MHz	≥70dB@2500-2 570MHz	≥70dB@2500-2 570MHz	≥70dB@2500-2 570MHz	≥75dB@2500-257 MHz
		≥40dB@2750-3 700MHz	≥40dB@2750-3 700MHz	≥40dB@2750-3 700MHz	≥40dB@2750-3 700MHz	≥40dB@2750-3700MHz
8	Input power	≤60W Average handling power at every input port				
9	Output power	≤300W Average handling power at COM port				
10	Impedance	50 Ω				
11	Temperature range	-40°C to +85°C				

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2.3 The simulation curve

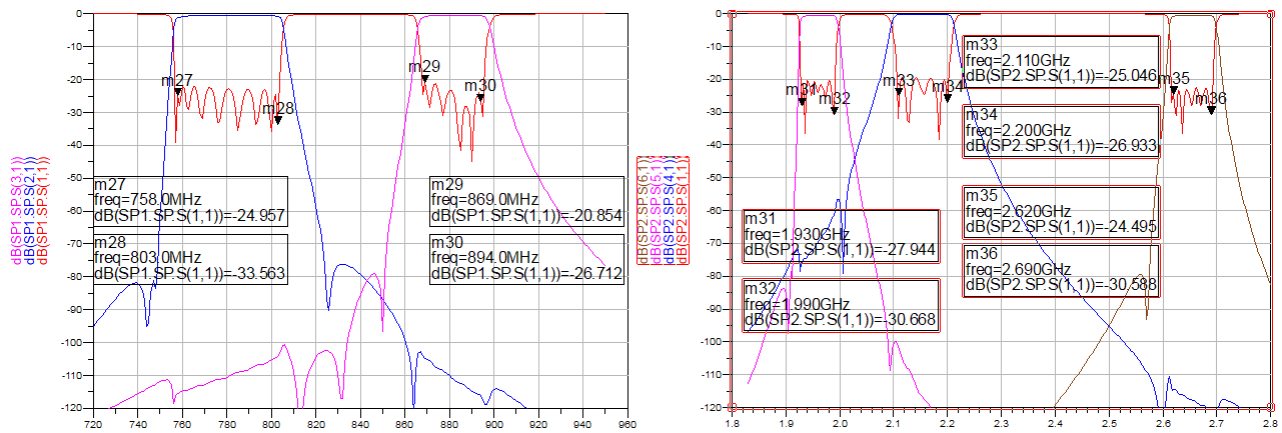


Figure 3 The simulation curve of the combiner

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