

Technical proposal for CMH000127-A-B7

Revision History

Version	Date	Author	Revision description	Comment
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1. Mechanical layout

Table 1 Mechanical Specifications

Dimension	LxWxH: 295mm x 200mm x 38 mm
Number of duplexer	2
TX Port connectors	SMA 4 hole panel receptacle plug
RX Port connectors	SMP 2 hole panel receptacle plug
ANT Port connectors	4.3/10 connector type
Ingress Protection	IP67 when coupled with RRH
Finish	RAL9010
Notes	Material shall be RoHS 6/6

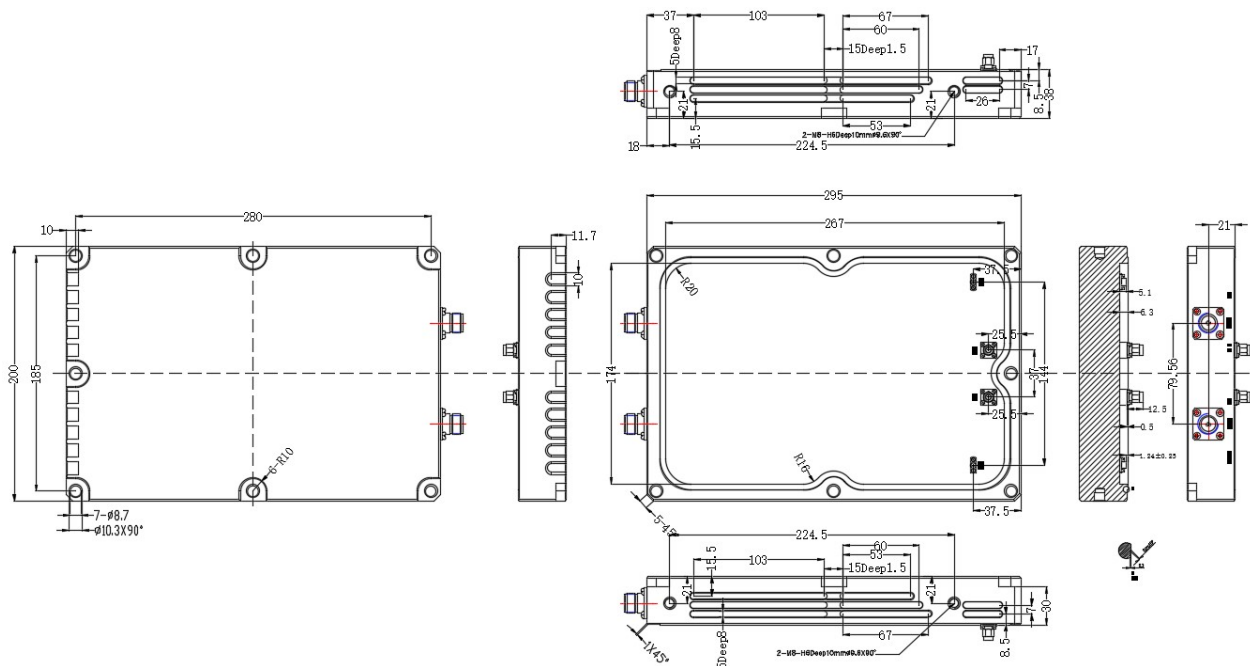


Figure 1 CMH000127-A-B7 front panel layout

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2. Electrical analysis

2.1 Schematic diagram of the Duplexer

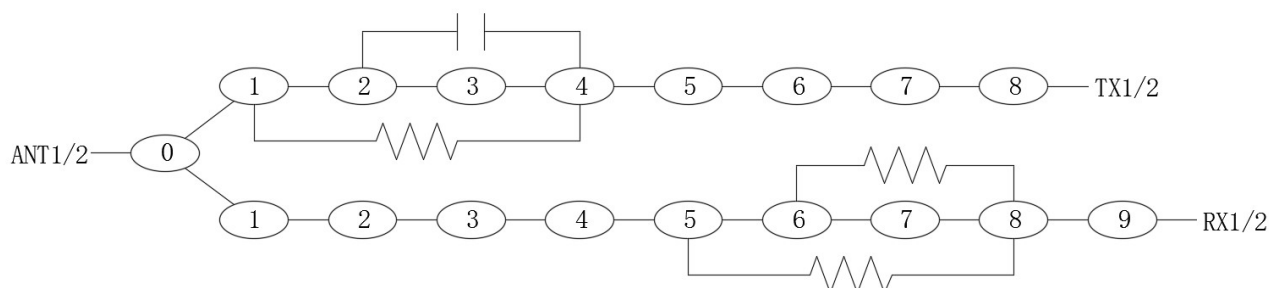


Figure 2 Topology of the Duplexer

2.2 Insertion loss budget

Table 2 Insertion loss budget @ TRX1/2 path

No.	Parameter Name	Insertion Loss @ TX1/2 path		Insertion Loss @ RX1/2 path	
		2620~2690MHz		2500~2570MHz	
1	TEMP	Normal	FULL	Normal	FULL
2	Simulate	0.61	0.69	0.59	0.64
3	Loss Variation by ambient temperature	/	0.15	/	0.15
4	Coupler+Lowpassfilter+connection link	0.05	0.05	0.05	0.05
5	Margin	0.1	0.1	0.1	0.1
6	Total	0.76	0.99	0.74	0.94
7	Spec	0.7	1.0	0.7	1.0

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2.3 Electrical specifications

Table 3 Electrical specifications @ TRX1/2 path

Item	Parameter	TX	RX	Spec	JX Suggest
1	Return loss (Normal Temp)	2620-2690MHz	2500-2570MHz	≥20 dB	OK
	Return loss (Full Temp)	2620-2690MHz	2500-2570MHz	≥20 dB	≥18 dB
2	Max insertion loss (Normal Temp)	2620-2690MHz	2500-2570MHz	≤0.7 dB	≤0.8 dB
	Max insertion loss (Full Temp)	2620-2690MHz	2500-2570MHz	≤1.0 dB	≤1.1 dB
3	In-band ripple(Full Temp)	2620-2690MHz	2500-2570MHz	≤0.8 dB	OK
4	Rejections(Full Temp)	100-2500MHz	100-2450MHz	≥50 dB	OK
		2750-5000MHz	2690-5000MHz	≥50 dB	OK
5	Isolation TX-RX	2620-2690MHz&2500-2570MHz		≥80 dB	OK
6	Isolation between the 2 duplexers	2620-2690MHz&2500-2570MHz		≥60 dB	OK
7	Impedance all ports			50 Ohm	OK
8	Admissible Power			150W CW	OK
9	PIMD			≤153 dBc	OK
10	Temperature Range			-40°C to 85°C	OK

2.4 The simulation curve

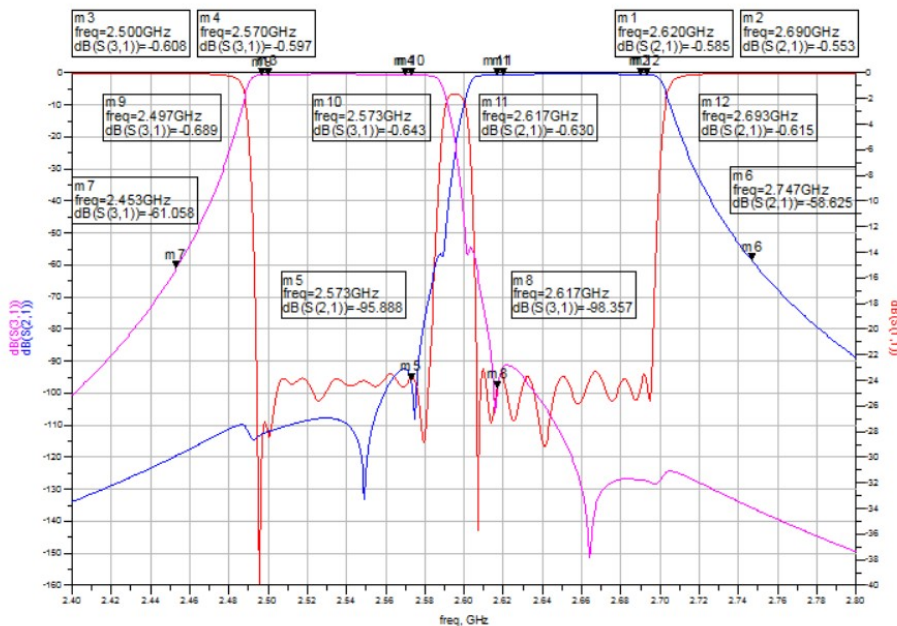


Figure 3 The simulation curve of Duplexer

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