

PRODUCT SPECIFICATION FOR INFORMATION

PRELIMINARY SPECIFICATION

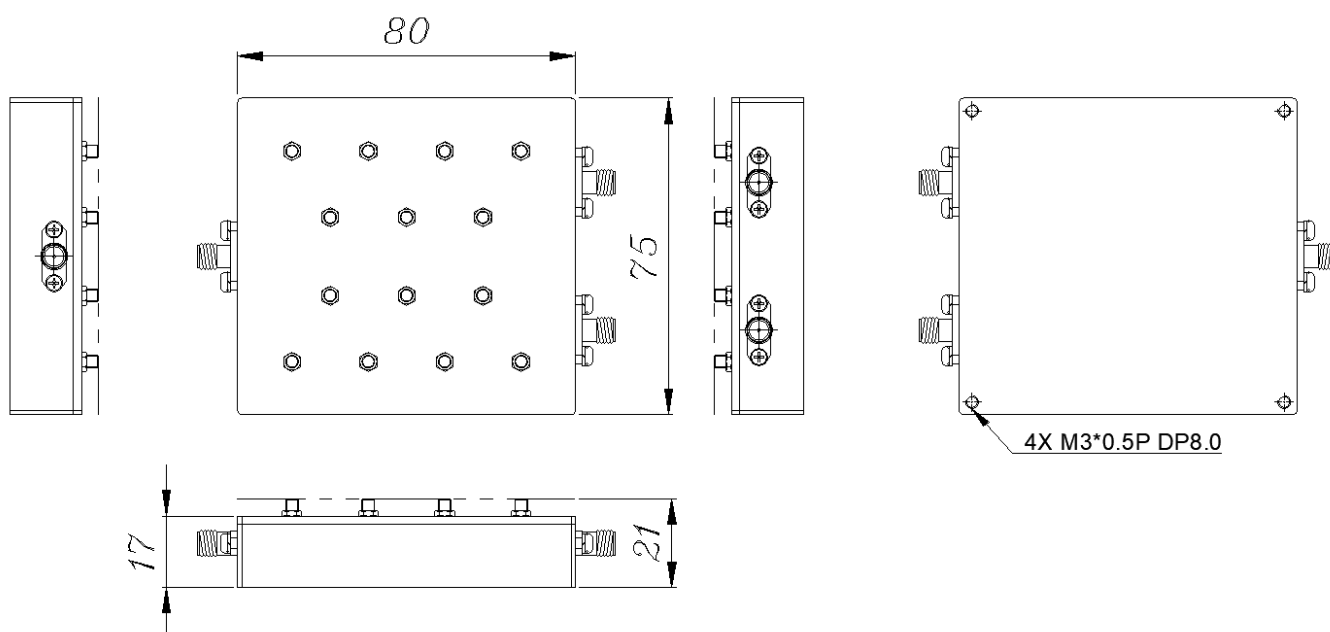
Product Name :C-Band Diplexer

Part No : MDI-C4500-C5000_200M-200MS-A-R0

■ History List

No.	Rev. No.	Description	Date	Author	Final Approver
1	R0	Draft	2025.02.24	Jeffrey Chung	Michael Jeon

■ Mechanical Drawing



■ Electrical Specification

Item	Specification		Remark
	TX	RX	
1. Center Frequency	4500 MHz	5000 MHz	OK
2. Pass Band Frequency	$F_c \pm 100 [4400 \sim 4600] \text{ MHz}$	$F_c \pm 100 [4900 \sim 5100] \text{ MHz}$	OK
3. Insertion Loss	0.7dB Max.	0.7dB Max.	OK
4. Return Loss In/Out	14dB Min.	14dB Min.	OK
5. In/Out Impedance	50 Ω		OK
6. Input Power	40W avg.		OK
7. Attenuation	65dB min.@4200MHz 65dB min.@4800MHz	65dB min.@4700MHz 65dB min.@5300MHz	OK
8. Operation Temperature Range	-20℃ to +65℃		OK
9. Connector	SMA (F)		OK
10. Size	80 x 75 x 17 mm(Max.21mm)		TBD
11. Finish	Black epoxy		TBD

Remarks: This is a preliminary datasheet for reference.

■ Simulation Curve

Insertion loss

A1
freq=4.4000GHz
dB(S(2,1))=-0.4927

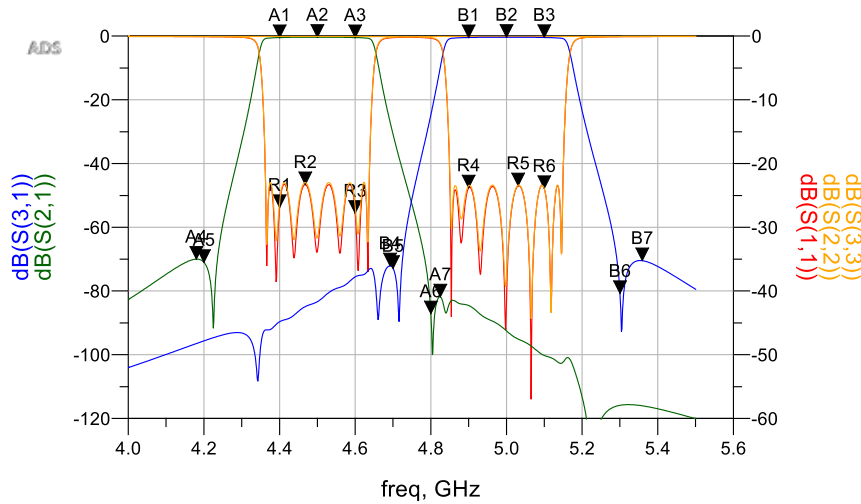
A2
freq=4.5000GHz
dB(S(2,1))=-0.3847

A3
freq=4.6000GHz
dB(S(2,1))=-0.4927

B1
freq=4.9000GHz
dB(S(3,1))=-0.4864

B2
freq=5.0000GHz
dB(S(3,1))=-0.3827

B3
freq=5.1000GHz
dB(S(3,1))=-0.4794



Rejection

A4
freq=4.1800GHz
dB(S(2,1))=-70.0231

B4
freq=4.6920GHz
dB(S(3,1))=-72.1220

A5
freq=4.2000GHz
dB(S(2,1))=-71.0170

B5
freq=4.7000GHz
dB(S(3,1))=-72.9230

A6
freq=4.8000GHz
dB(S(2,1))=-87.1814

B6
freq=5.3000GHz
dB(S(3,1))=-80.8039

A7
freq=4.8250GHz
dB(S(2,1))=-81.8577

B7
freq=5.3590GHz
dB(S(3,1))=-70.5087

Return loss

R1
freq=4.4000GHz
dB(S(1,1))=-26.8966

R2
freq=4.4680GHz
dB(S(1,1))=-23.3187

R3
freq=4.6000GHz
dB(S(1,1))=-27.8081

R4
freq=4.9000GHz
dB(S(1,1))=-23.8354

R5
freq=5.0310GHz
dB(S(1,1))=-23.5026

R6
freq=5.1000GHz
dB(S(1,1))=-23.9340