

19.45 & 29.25 GHz Diplexer

RoHS✓

Band 1: 17.7 – 21.2 GHz

Band 2: 27.5 - 31 GHz

Z₀ = 50Ω

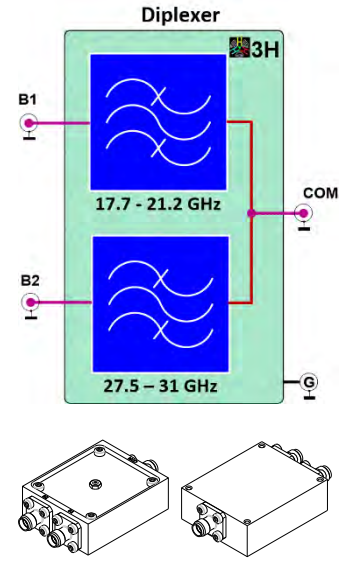
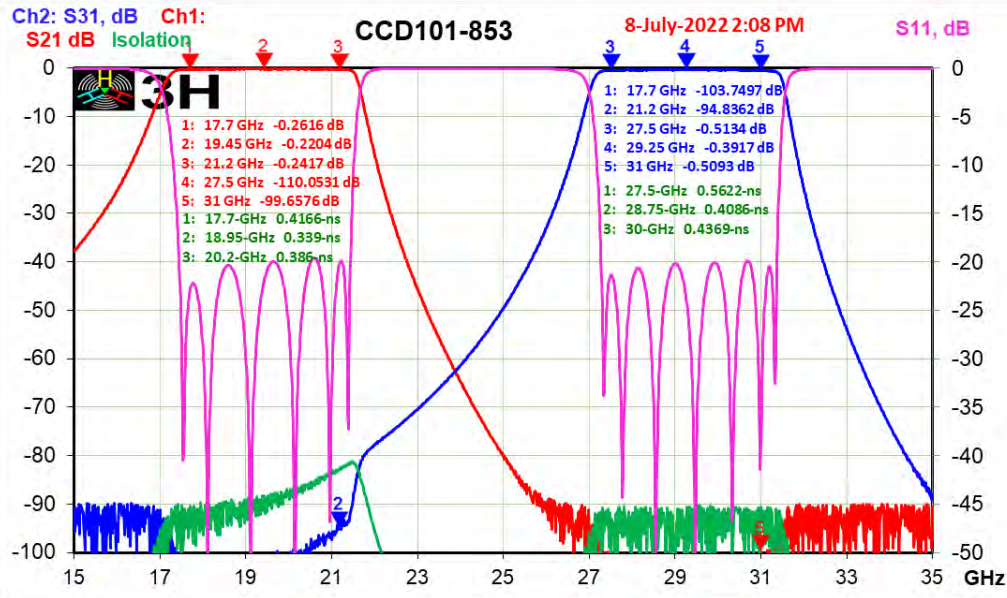


3H Communication Systems

CCD101-853

Rev	Change Description
0	Initial Draft

Date	ENG	MFG/QA	MKT
7/8/2022	PS	LW	MG



ELECTRICAL SPECIFICATIONS

BAND 1 (B1) to COM Port:

Pass Band	17.7 – 21.2 GHz (F0=19.45 GHz)
Insertion Loss @Pass Band	1 dB max
Rejections:	
27.5 – 31 GHz	80 dB min

BAND 2 (B2) to COM Port:

Pass Band	27.5 – 31 GHz (F0=29.25 GHz)
Insertion Loss @Pass Band	1 dB max
Rejections:	
17.7 – 21.2 GHz	80 dB min

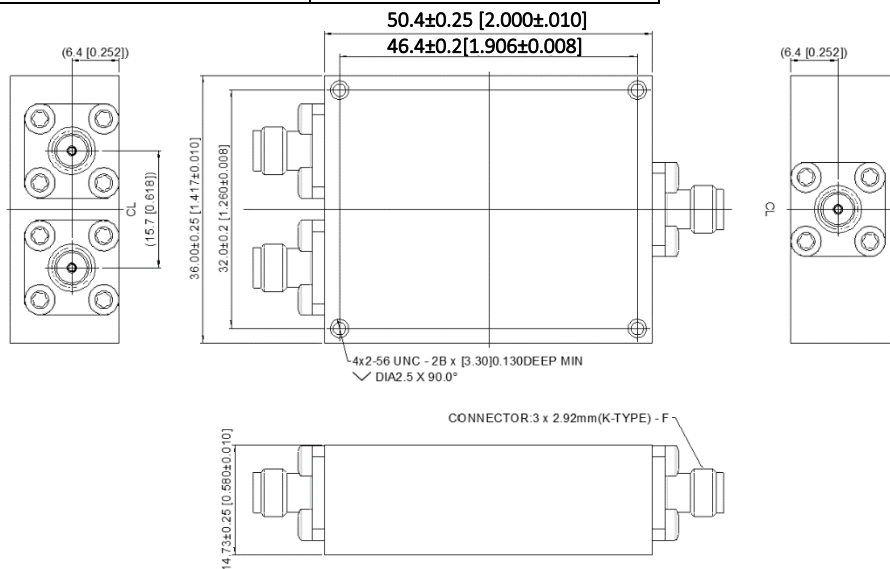
Return Loss, All Ports	15 dB min
Power, Each Band	+40 dBm CW (10 W)
B1/B2 Isolation (Each Band)	80 dB min

MECHANICAL SPECIFICATIONS

Connectors	K-Female for all ports
RF Connectors Configuration	In Line
Markings	B1, B2, COM ENGRAVED
Weight	~0.3 Kg Max TBD
Size	50.4 x 36 x 14.73 mm ³ [2"x1.417"x.58"] max

ENVIRONMENTAL/QUALITY SPECIFICATIONS

Operating Temperature Range	-40 to +85°C
Non-Operating Temperature Range	-55 to +125°C
Vibration 10 to 500 Hz	10 G Mx
Shock Duration	11 ms
IP Class	IP63 for Indoor
Humidity, Relative non-condensing	95% max



Note: This is preliminary mechanical layout and some dimensions may change slightly during prototyping and will be finalized after the first prototype.

It is common for silver plated parts to tarnish after being exposed to the air and may not look aesthetically pleasing after a while, however, the performance will not degrade.

Drawn By:	Material: AL, CU, Ag	Tolerances .XX ±0.020[0.508] .XXX ±.010[0.254]	Proprietary Notice: The Information contained in this document is proprietary and shall not be used or disclosed without the prior written permission of 3H. R2880C.		
QA Approval:	AL, ULTEM, PTFE, BRASS, Copper, Loctite		Date	DWG #	Unite
Eng. Approval:	Finish: Silver plated or Natural Aluminium		July 8, 22	101-851	In[mm] 1 of 1