

DBCT108F2V72-2

DIPLEXER 600-700/850

The Kaelus DBCT108 is a bi-directional Diplexer designed to combine 600-700 with 850 technologies, the DBCT108 provides excellent insertion loss and passive intermodulation performance. Bidirectional passage of DC/AISG is provided in this outdoor product.

FEATURES

- Enables antenna/feeder sharing for 600-700 and 850 networks
- Designed and 100% tested for low passive intermodulation
- Autosense of DC allows operation at the bottom or the top of the tower
- Low insertion losses
- Good return loss



TECHNICAL SPECIFICATIONS

PORT NAME	600-700	850
Passband	555 - 788MHz	817 - 894MHz
Insertion loss	0.15dB typical	0.2dB typical
Return loss	23dB typical	
EVM	≤0.5% across any 10MHz	≤0.5% across any 20MHz
Group delay variation	7.5ns typical over any 10MHz	10ns typical over any 20MHz
Absolute group delay	7.5ns typical	17.5ns typical
Maximum input power	120W (average) / 1200W (PEP)	120W (average) / 1200W (PEP)
Phase linearity over any 10MHz	2° typical, 10 °maximum	

ELECTRICAL

Impedance	50Ohms	
Intermodulation products	-156dBc maximum with 2 x 20W carriers	
Isolation	60dB typical	50dB typical

DC / AISG

The DC/AISG path is automatically selected. In bottom of the tower applications (combiner mode), each RF channel port is sequentially checked for the presence of DC voltage. If more than one port has voltage, the port that has the highest (programmed) priority is passed to the common port. If a short circuit is detected on the common port DC/AISG is disabled. In top-of-tower applications (splitter mode), DC/AISG is passed to all ports that do not present a short circuit. If a short circuit is detected, the shorted RF port will be disabled for DC/AISG while other RF ports remain connected.

Passband	2.076 -2.276MHz
Input voltage range	7.5 - 30V DC
DC current rating	2.5A continuous
Port priority (combiner mode)	1st) 600-700, 2nd) 850

ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

Temperature range	-40°C to +65°C -40°F to +149°F
Ingress protection	IP67
Altitude	3000m/10,000ft maximum
Lightning protection	RF: ±5kA maximum (8/20us), IEC61312-1
MTBF	>1,000,000 hours
Compliance	FCC Part 15 subpart B

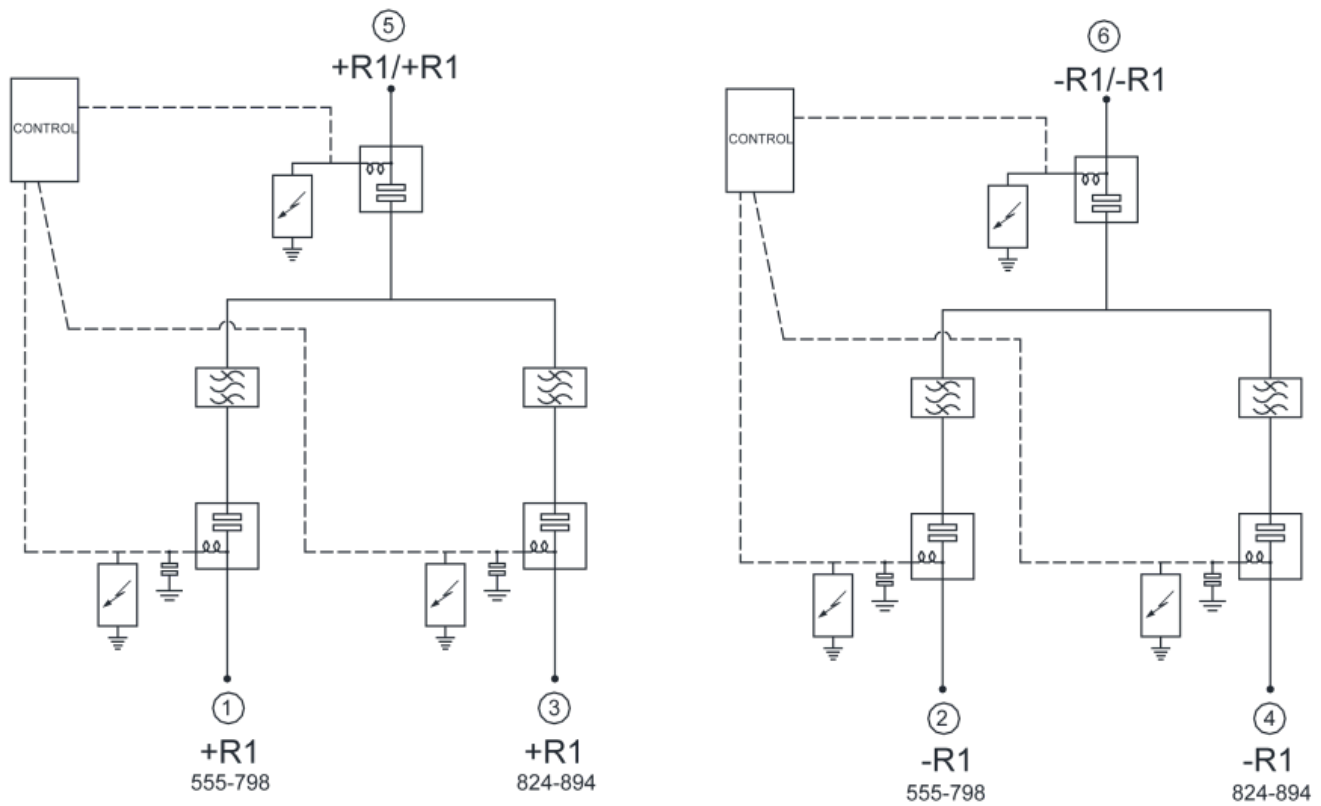
MECHANICAL	
Dimensions H x D x W (single twin unit)	172 x 267 x 89 mm 6.77 x 10.51 x 3.50 in maximum
Dimensions H x D x W (dual twin unit)	172 x 267 x 183 mm 6.77 x 10.51 x 7.20 in maximum
Weight	5.5kg / 12lbs (single twin) 10.9kg / 24lbs (dual twin)
Finish	Painted, light grey (RAL7035)
Connectors	4.3-10 (F) x 6 long neck (single twin) 4.3-10 (F) x 12 long neck (dual twin)
Wind Load	Front 55N, Side 304N (single twin) Front 140N, Side 339N (dual twin) At 74m/s (AS/NZS 1170-2-2011 Structural design - Wind actions - Cyclone areas)
Mounting	Pole/wall bracket supplied with two metal clamps for 45-178 mm diameter poles

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS	DC/AISG CONFIGURATION
DBC0108F2V72-1	SINGLE 1 in / 2 out	DC AUTOSENSING NO LED	4.3-10 (F)	PRIORITY 600-700/850
DBCT108F2V72-1	TWIN 2 in / 4 out	DC AUTOSENSING NO LED	4.3-10 (F)	PRIORITY 600-700/850
DBCT108F2V72-2	QUAD 4 in / 8 out	DC AUTOSENSING NO LED	4.3-10 (F)	PRIORITY 600-700/850

ELECTRICAL BLOCK DIAGRAM

- Port 1 and 2 port is 600-700 band
- Port 3 and 4 port is 850 band



TWIN ELECTRICAL DIAGRAM

MECHANICAL BLOCK DIAGRAM

