

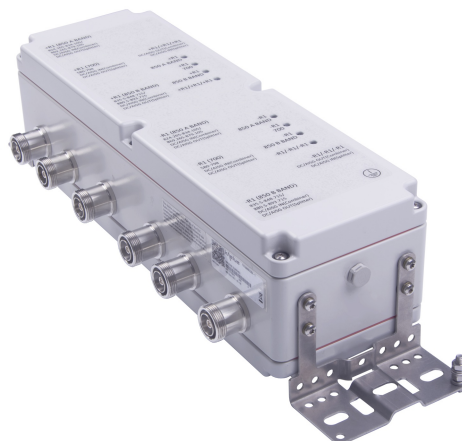
# TBC0046F2V64-1

## 700/850A/850B TWIN TRIPLEXER FOR 10MHZ LTE OVERLAY

Designed to combine two 850MHz and a 700MHz base stations, the Kaelus TBC0046 triplexer provides low loss combining with excellent insertion loss and passive inter-modulation performance.

### FEATURES

- Combines legacy CDMA with 10MHz LTE carrier.
- Extremely close (zero guardband) spacing in 850MHz bands
- DC/AISG autosensing with LED visual status
- Offers low insertion loss
- Low passive IM performance



### TECHNICAL SPECIFICATIONS

BAND NAME	R1 (850 A BAND)	R1 (850 B BAND)	R1 (700)
Passband	CDMA: CH1019 thru CH283 or LTE CH2454 (DL) and 20454 (UL)	CDMA: CH384 thru CH630 and CH691 (A') and CH770 (B') or LTE CH2560 (DL) and 20560 (UL)	580-798MHz
Insertion loss	1.0dB typical	1.0dB typical	0.15dB typical
Return loss	24dB typical	24dB typical	19dB minimum, 21dB typical
EVM	LTE 1% maximum, 0.25% typical CDMA 5% maximum, 1% typical	LTE 1% maximum, 0.25% typical CDMA 5% maximum, 1% typical	1% maximum, 0.25% typical
Group delay variation	110ns maximum	110ns maximum	25ns maximum
Absolute group delay	150ns maximum (band edge) 50ns typical (mid-band)	150ns maximum (band edge) 50ns typical (mid-band)	35ns maximum (band edge) 5ns typical (mid-band)
Maximum input power	160W (average) / 1600W (PEP)	80W (average) / 800W (PEP)	80W (average) / 800W (PEP)
Isolation	30dB minimum, 35dB typical	30dB minimum, 35dB typical	30dB minimum, 35dB typical

### ELECTRICAL

Impedance	50Ohms
Intermodulation products	-155dBc max. all ports with 2 x 20W carriers in receive bands

### 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.

Input voltage range	7.5 – 30V DC
DC current rating	2A continuous
Compliance	3GPP, TS 25.461
Current consumption	15mA typical, 25mA maximum
Port priority (combiner mode)	R1 (850 B Band) First, R1 (700) Second, R1 (850 A Band) Third
LEDs	1 bi-colour LED per RF port connector
LEDs, bottom of tower application:	
- DC/AISG not present	Off
- DC/AISG pass	Green
- DC/AISG present, not passed	Red
LEDs, top of tower application:	
- DC/AISG pass	Green
- All ports disabled	COM LED red

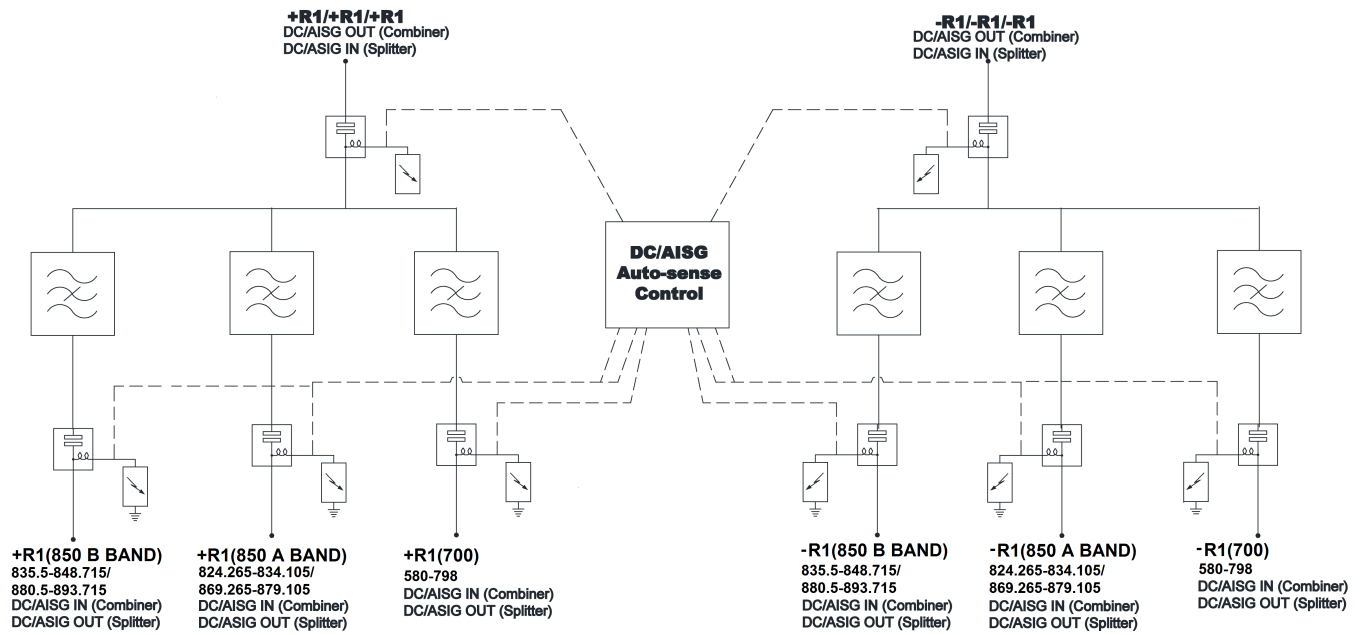
ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +65°C   +4°F to +149°F
Ingress protection	IP67, Outdoor unit
Lightning protection	IEC61312-1, RF: ±5kA maximum (8/20us)
MTBF	>1,000,000 hours

MECHANICAL	
Dimensions H x D x W	425.8 x 138 x 125mm   16.8 x 5.4 x 4.9inch
Weight	10.3kg   22.7lbs
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: DIN 7-16 (F) x 8 long neck
Wind Load	Front 345N, Side 275N 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
TBC0046F2V64-1	TWIN 2 in / 6 out	DC AUTOSENSING WITH LED	7/16 (F)	PRIORITY 850 B-Band/700/850 A-Band

## ELECTRICAL BLOCK DIAGRAM



## MECHANICAL BLOCK DIAGRAM

