

# DBC0099F5V51-1

## TWIN SAME BAND COMBINER 1900

Designed to combine two 1900MHz base stations, the Kaelus DBC0099 provides a low loss combiner with excellent insertion loss and passive inter-modulation performance.

### FEATURES

- Combines two 1900MHz BTS onto a single feeder without guard band
- Designed for low passive inter-modulation
- DC/AISG bypass field selectable
- Very low insertion loss



### TECHNICAL SPECIFICATIONS

BAND NAME	AT BTS1_X	AT BTS2_X
Insertion loss	0.75dB typical, 1.0dB maximum (band edge, over full temp range)	
EVM	1% typical mid-band, 10% maximum (CDMA and LTE 1.4MHz)	
Group delay variation	200ns typical, 300ns maximum / 1.25MHz	75ns typical, 250ns maximum / 180kHz
Absolute group delay	310ns typical, 500ns maximum (band-edge) 75ns typical, 100ns maximum (mid-band)	
<b>ISOLATION COM PORT MUST BE TERMINATED IN 50OHMS</b>		
BTS1 TX frequency range	35dB typical, 30dB minimum	
BTS2 TX frequency range	35dB typical, 30dB minimum	
BTS1 RX frequency range	35dB typical, 30dB minimum	
BTS2 RX frequency range	35dB typical, 30dB minimum	
<b>ELECTRICAL</b>		
Impedance	50Ohms	
Return loss	20dB minimum, 24dB typical.	
Intermodulation products	-161dBc typical / -155dBc maximum all ports with 2 x 20W carriers (out of band IM testing <3 minutes)	
Maximum input power	150W (average) / 1.5kW (PEP)	
<b>DC / AISG</b>		
A field selectable DC/AISG path is achieved via mechanical links on a IEC60130-9, 8-pin female connector (see mechanical diagram).		
Passband	0 - 3MHz	
Insertion loss, single DC/AISG pass	1dB maximum	
Return loss, single DC/AISG pass	12dB minimum	
Insertion loss, two DC/AISG pass	4.5dB typical	
Return loss, two DC/AISG pass	9dB typical	
Input voltage range	± 31V	
DC current rating	2A continuous, 4A peak	

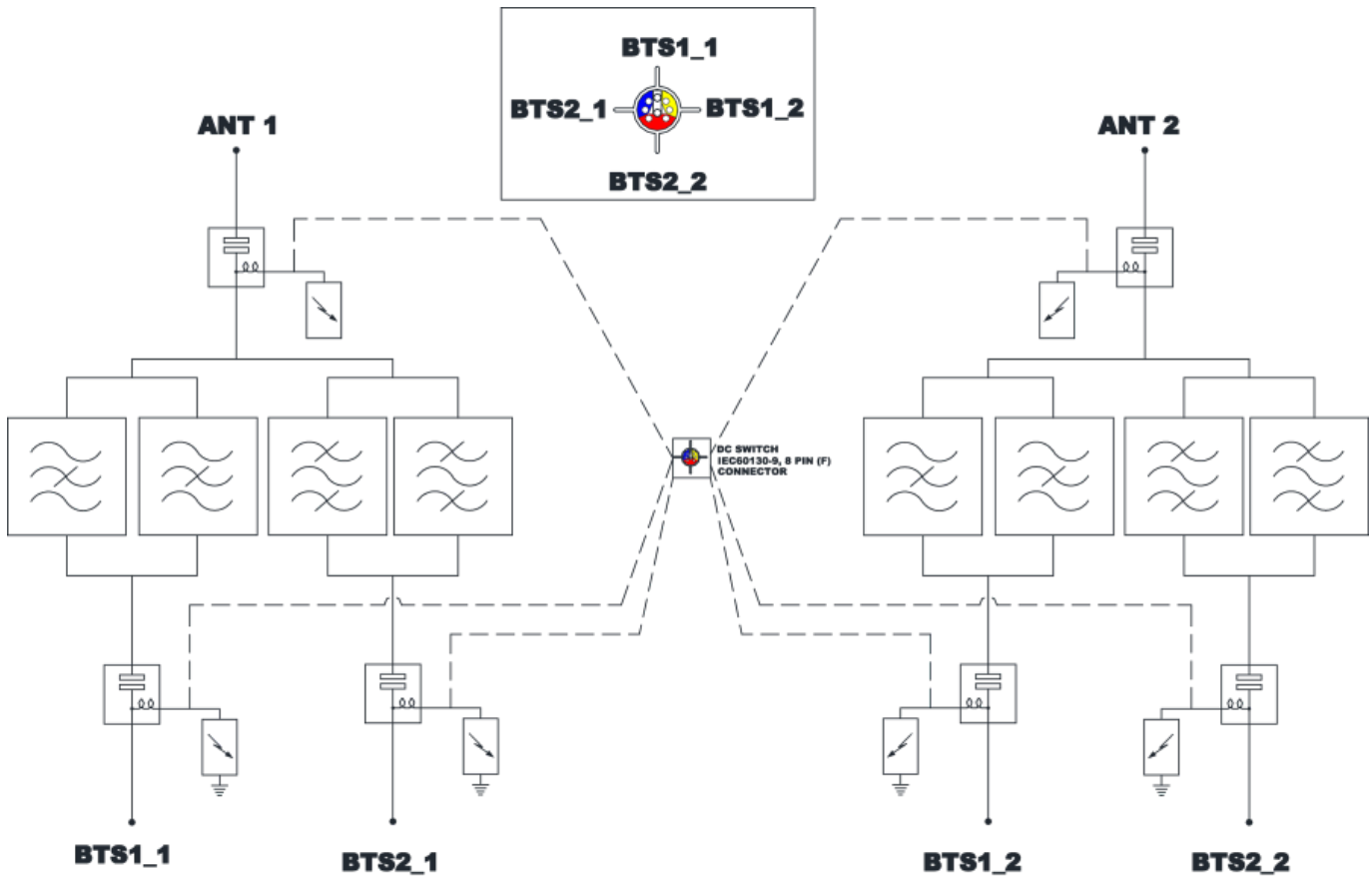
ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +50°C   +4°F to +122°F
Ingress protection	IP67
Altitude	3,000m   10,000ft maximum
Lightning protection	RF: ±5kA maximum (8/20us)
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1, RoHS

MECHANICAL	
Dimensions H x D x W	282 x 276 x 204mm   11.09 x 10.85 x 8.03in
Weight	18.3kg   40.3lbs
Finish	Painted, light grey (RAL7035)
Connectors	DIN 7-16 (F) x 6 long neck
Mounting	Pole/wall bracket supplied with two metal clamps for 45-178 mm diameter poles

## ORDERING INFORMATION

PART NUMBER	BTS1 BAND	BTS2 BAND	DESCRIPTION
DBC0099F1V51-1	A3	A4, A5, B, C, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F2V51-1	A3, A4	A5, B, C, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F3V51-1	A4, A5	A3, B, C, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F4V51-1	A5, D	A3,A4, B, C, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F5V51-1	D, B3	A, B4, B5, C, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F6V51-1	B3,B4	A, B5, C, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F7V51-1	B4,B5	A, B3, C, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F8V51-1	B5, E	A, B3, B4, C, D, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F9V51-1	E, F	A, B, C, D, & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F10V51-1	F, C3	A, B, C4, C5, D, E & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F11V51-1	C3, C4	A, B, C5, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F12V51-1	C4, C5	A, B, C3, D, E, F & G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F13V51-1	C5, G	A, B, C3, C4, D, E & F	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F14V51-1	G	A, B, C, D, E & F	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch
DBC0099F15V51-1	C3b,C4,C5a	A,B,C3a,C5b,D,E, F, G	Twin Same Band Combiner, 1900 - DC/AISG field selectable through external DC switch

**ELECTRICAL BLOCK DIAGRAM**



MECHANICAL BLOCK DIAGRAM

