

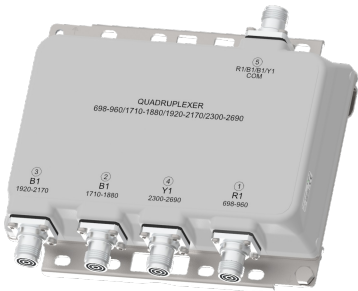
# KA-4005

## QUADRUPLER 700-900/1800/2100/2300-2600

Designed to combine 700/850/900/1800/2100/2300/2600 bands, the Kaelus KA-4005 saves significant capital and operational expenses by limiting feeder runs, and components needed on the tower. Available in an outdoor package the KA-4005 has the following features:

### FEATURES

- Combines 700/850/900/1800/2100/2300 and 2600 bands
- Very low insertion loss
- Very low passive intermodulation
- DC/AISG bypass field settable
- Wall or pole mounting
- High power handling
- Single and twin configurations available



### TECHNICAL SPECIFICATIONS

| BAND NAME                | 700-900                           | 1800                                   | 2100                                    | 2300-2600                         |
|--------------------------|-----------------------------------|----------------------------------------|-----------------------------------------|-----------------------------------|
| Passband                 | 698 - 960MHz                      | 1710 - 1880MHz                         | 1920 - 2170MHz                          | 2300 - 2690MHz                    |
| Insertion loss           | 0.1dB typical, 0.2dB maximum      | 0.3dB typical, 0.5dB maximum           | 0.3dB typical, 0.5dB maximum            | 0.2dB typical, 0.3dB maximum      |
| Return loss              | 20dB typical, 18dB minimum        |                                        |                                         |                                   |
| Maximum input power      | 250W (average) *                  | 250W (average) *                       | 250W (average) *                        | 250W (average) *                  |
| Intermodulation products | < -153dBc at 2 x 43dBm TX Carrier | < -153dBc at 2 x 43dBm TX Carrier      | < -160dBc at 2 x 43dBm TX Carrier (IM7) | < -153dBc at 2 x 43dBm TX Carrier |
| Rejection                | 1710-2690MHz: 50dB                | 698-960MHz: 50dB<br>1920-2690MHz: 50dB | 698-1880MHz: 50dB<br>2300-2690MHz: 50dB | 698-2170MHz: 50dB                 |

(\*) Limited to 500W (average) combined power at the common port.

| ELECTRICAL |        |
|------------|--------|
| Impedance  | 50Ohms |

| DC / AISG                                                      |                |
|----------------------------------------------------------------|----------------|
| DC/AISG path is factory configurable, see ordering information |                |
| Passband                                                       | 0 – 3MHz       |
| Insertion loss                                                 | 1dB maximum    |
| Return loss                                                    | 12dB minimum   |
| Input voltage range                                            | ± 30V          |
| DC current rating                                              | 3A continuous  |
| Compliance                                                     | 3GPP TS 37.461 |

| 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                                                                                                                         |
| Lightning protection                                                    | ±5kA maximum (8/20us)                                                                                                        |
| MTBF                                                                    | >1,000,000 hours                                                                                                             |
| Compliance                                                              | Operation: ETSI EN 300 019 class 4.1E<br>Storage: ETS 300 019-1-1 class 1.3E<br>Transport: ETS 300 019-1-2 class 2.3<br>RoHS |

| MECHANICAL                         |                                                                               |
|------------------------------------|-------------------------------------------------------------------------------|
| Dimensions H x D x W (single unit) | 250 x 160 x 49mm   9.84 x 6.30 x 1.93"                                        |
| Dimensions H x D x W (twin unit)   | 250 x 160 x 104mm   9.84 x 6.30 x 4.09"                                       |
| Weight                             | 4.5kg   9.8lbs (Single)<br>8.2kg   18.0lbs (Dual)                             |
| Finish                             | Powder Coated, light grey, NCS 1502-R                                         |
| Connectors                         | 4.3-10 (F) or 7/16 (F)                                                        |
| Mounting                           | Pole/wall bracket supplied with two metal clamps for 40-140 mm diameter poles |

| SHIPPING INFORMATION               |                                             |                                               |
|------------------------------------|---------------------------------------------|-----------------------------------------------|
| Carton size                        | 330 x 305 x 160mm   13.0x12.0x6.3" (Single) | 330 x 310 x 190mm   13.0 x 12.2 x 7.5" (Twin) |
| Gross weight (including packaging) | 5.5kg   12.1lbs (Single)                    | 9.2kg   20.2lbs (Twin)                        |
| Carton Qty / Pallet                | 56                                          | 48                                            |

## ORDERING INFORMATION

| PART NUMBER  | CONFIGURATION | OPTIONAL FEATURES | CONNECTORS | DC/AISG CONFIGURATION |
|--------------|---------------|-------------------|------------|-----------------------|
| KA-4005-1031 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | NO DC                 |
| KA-4005-1032 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | DC TO ALL             |
| KA-4005-1033 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | DC to 700 - 900       |
| KA-4005-1034 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | DC to 1800            |
| KA-4005-1035 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | DC to 2100            |
| KA-4005-1036 | 4 in / 1 out  | FIXED DC          | 4.3-10 (F) | DC TO 2300 - 2600     |
| KA-4005-2031 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | NO DC                 |
| KA-4005-2032 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | DC TO ALL             |
| KA-4005-2033 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | DC to 700 - 900       |
| KA-4005-2034 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | DC to 1800            |
| KA-4005-2035 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | DC to 2100            |
| KA-4005-2036 | 8 in / 2 out  | FIXED DC          | 4.3-10 (F) | DC TO 2300 - 2600     |
| KA-4005-1001 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | NO DC                 |
| KA-4005-1002 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | DC TO ALL             |
| KA-4005-1003 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | DC to 700 - 900       |
| KA-4005-1004 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | DC to 1800            |
| KA-4005-1005 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | DC to 2100            |
| KA-4005-1006 | 4 in / 1 out  | FIXED DC          | 7/16 (F)   | DC TO 2300 - 2600     |
| KA-4005-2001 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | NO DC                 |
| KA-4005-2002 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | DC TO ALL             |
| KA-4005-2003 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | DC to 700 - 900       |
| KA-4005-2004 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | DC to 1800            |
| KA-4005-2005 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | DC to 2100            |
| KA-4005-2006 | 8 in / 2 out  | FIXED DC          | 7/16 (F)   | DC TO 2300 - 2600     |

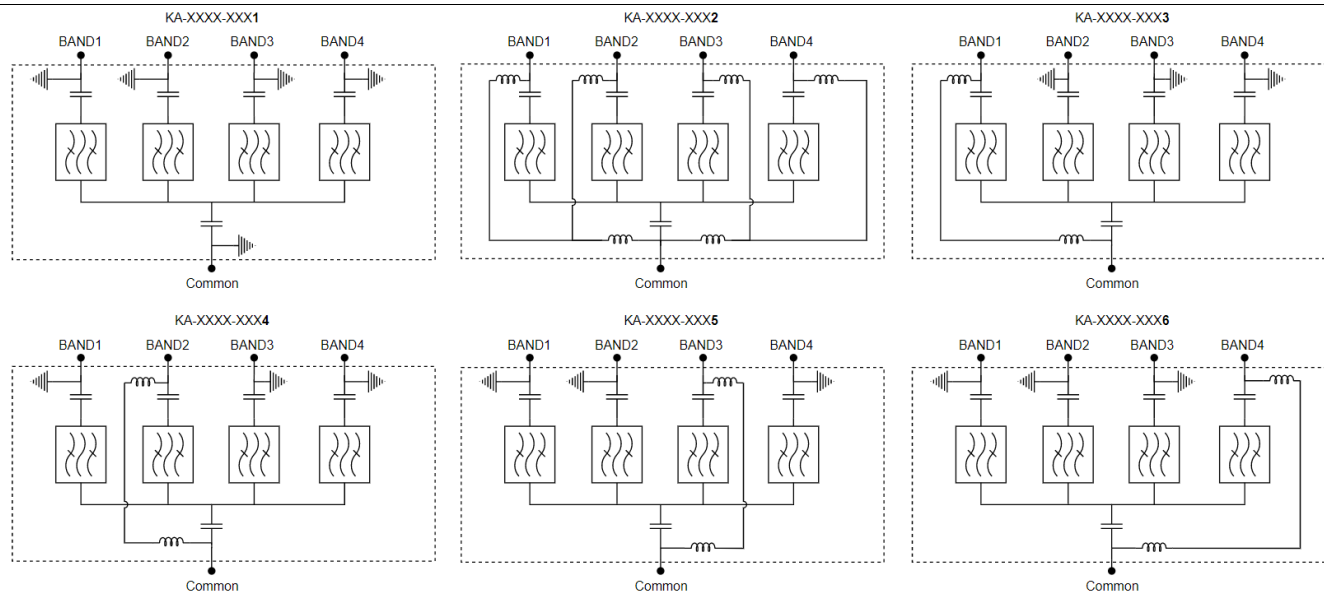
Other DC path options are available.  
DC autosensing available.  
Contact Kaelus for details

## ELECTRICAL BLOCK DIAGRAM

KA-4005-WXYZ where

- **X** denotes the configuration: W=1, single 1:4 and W=2, twin 2:8
- **Z** denotes the DC/AISG configuration (see ordering information)

- **BAND1** port is 700 - 900 band
- **BAND2** port is 1800 band
- **BAND3** port is 2100 band
- **BAND4** port is 2300 - 2600 band



## MECHANICAL BLOCK DIAGRAM

