

# KA-6020

## TWIN 700/800/900 OUT OF BAND EMISSION FILTER (PROTECT GSM-R DL BAND)

The KA-6020 is ideal for co-located 700/800/900 and GSM-R networks. This filter is to be used on the commercial 700/800/900 BTS side to protect the GSM-R network from wideband interference. Utilising a 5MHz guardband the KA-6020 provides rejection of out of band emission into GSM-R band while passing 700, 800 & 900 UL and DL bands. Capable of being used in an outdoor environment the KA-6020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay, EVM and rejection.



### FEATURES

- Rejection of out of band emissions into GSM-R downlink
- Passes full 700 & 800 band and the upper 30 MHz of the 900 band
- Notch filter structure
- DC/AISG pass
- Low insertion loss
- Outdoor and indoor configurations
- Twin unit

### TECHNICAL SPECIFICATIONS

| BAND NAME      | 700 & 800 BAND               | 900 BAND                   |
|----------------|------------------------------|----------------------------|
| Passband       | 703 - 862MHz                 | 885-915, 930-960MHz        |
| Insertion loss | 0.9 dB max, 0.4 dB typical   | 0.9 dB max, 0.4 dB typical |
| Return loss    | 20 dB typical, 18 dB minimum |                            |
| Rejection      | 50dB minimum @ 921-925MHz    |                            |

#### ELECTRICAL

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Impedance                      | 50Ohms                                     |
| Intermodulation products       | -160dBc maximum with 2x20W (IM3)           |
| Maximum input power (Per Port) | 200W continuous, 2000W peak - at sea level |

#### DC / AISG

|                     |                        |
|---------------------|------------------------|
| Passband            | 0 – 3MHz               |
| Insertion loss      | 0.3dB maximum          |
| Return loss         | 15dB minimum           |
| Input voltage range | ± 35V                  |
| DC current rating   | 2A continuous, 4A peak |
| Compliance          | 3GPP TS 37.461         |

#### ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

|                      |                                                                                                                  |
|----------------------|------------------------------------------------------------------------------------------------------------------|
| Temperature range    | -40°C to +55°C                                                                                                   |
| Ingress protection   | IP67, Outdoor unit                                                                                               |
| Lightning protection | RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits. |
| MTBF                 | >1,000,000 hours                                                                                                 |
| Compliance           | ETSI EN 300 019 class 4.1E, RoHS                                                                                 |

#### MECHANICAL

|                      |                                                                          |
|----------------------|--------------------------------------------------------------------------|
| Dimensions H x D x W | 334x130x80mm   13.1 x 5.11 x 3.14in (Excluding brackets and connectors)  |
| Weight               | 4.4kg   9.7lbs estimated                                                 |
| Finish               | Powder coated, light grey (NCS 1502-R)                                   |
| Connectors           | RF: 4.3-10 (F) x 4                                                       |
| Mounting             | Pole/wall bracket supplied with two metal clamps 45-178mm diameter poles |

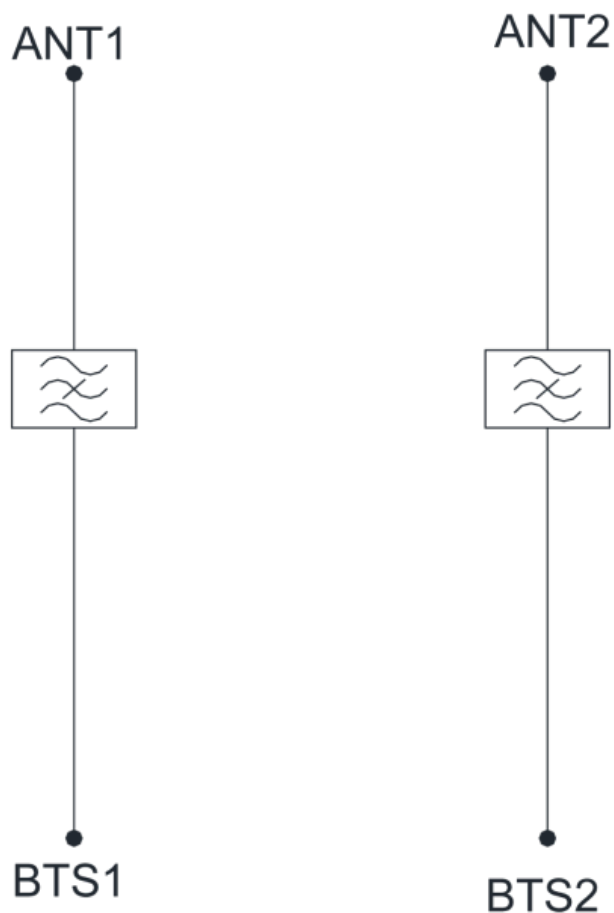
**SHIPPING INFORMATION**

|                                    |                   |
|------------------------------------|-------------------|
| Carton size                        | 470 x 210 x 155mm |
| Gross weight (including packaging) | 4.7kg             |

**ORDERING INFORMATION**

| PART NUMBER  | CONFIGURATION      | OPTIONAL FEATURES | CONNECTORS |
|--------------|--------------------|-------------------|------------|
| KA-6020-2032 | TWIN, 2 in / 2 out | DC/AISG PASS      | 4.3-10 (F) |

## ELECTRICAL BLOCK DIAGRAM



# MECHANICAL BLOCK DIAGRAM

