



## 3W Universal Ka-Band Transceiver

### KEY FEATURES

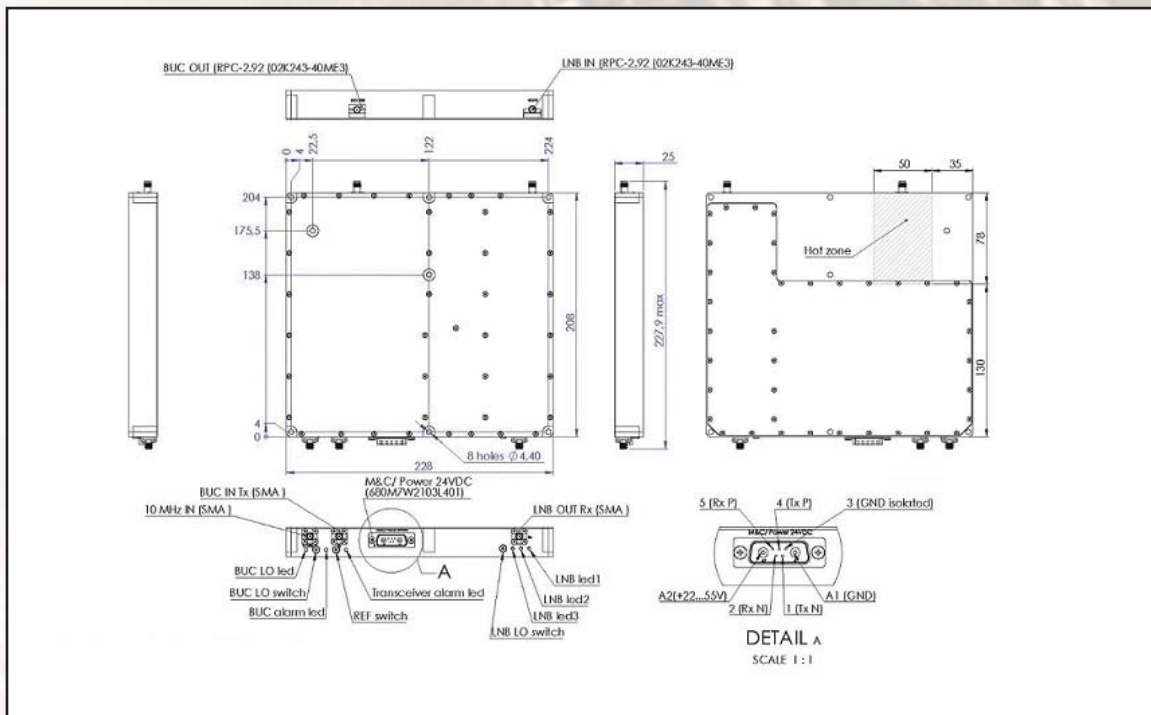
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Input frequencies 17.20-22.20 GHz
- ◆ Tx L.O. (electronically and manually switchable)  
26.55, 26.60, 27.20, 27.4, 28.05 and 29.05 GHz
- ◆ Rx L.O. (electronically and manually switchable)  
16.25, 16.8, 17.25, 17.4, 18.25, 19.25 and 20.25 GHz
- ◆ Low power consumption (48W max.)
- ◆ M&C - combined RS-232/485, FSK and Ethernet control (HTTP and SNMP) available for Tx and Rx
- ◆ L.O. lock and amplifier LEDs
- ◆ Internal 10MHz high stability reference autosensing and controllable (optional)

### AT3UKAS / AT3UKASF



This unique first ever 3W Universal Ka-Band Transceiver covers 27.5-31.0 GHz frequency bands in (Tx) transmit, and 17.20-22.20 GHz frequency band in (Rx) receive. The M&C capability enables trouble shooting, monitoring and controlling the Rx and Tx functionality. Autosensing internal 10MHz reference allows to use the unit with any modulator & receiver.

### Mechanical Drawing





## 3W Universal Ka-Band Transceiver

| TECHNICAL SPECIFICATIONS                  |  |
|---|--|
| <b>Tx</b>                                 |  |
| RF frequency                              | 27.5 - 31.0 GHz  |
| Local oscillator                          | 26.55, 26.60, 27.2, 27.4, 28.05 and 29.05 GHz                        |
| IF frequency                              | 950 to 1,950 MHz   |
| Output power, P-Linear @ IMD3=-25 dBc     | 3W (+35 dBm min.), P-Linear 1.6W (+32 dBm min.)                      |
| Impedance SMA Connector                   | SMA, 2.92mm (50Ohms)   |
| Input V.S.W.R.                            | 1.5:1 max.   |
| Gain                                      | 63 dB typ.   |
| Spurious                                  | -55 dBc  |
| TX Gain variation                         | ± 0.5 dB over 40 MHz   |
| TX Gain stability over temperature range  | ± 1.8 dB over full band  |
| Phase noise                               | -78 dBc/Hz max. @ 1 KHz  |
| (Exceeds Intelsat's standard IESS308/309) | -83 dBc/Hz max. @ 10 KHz   |
|   | -94 dBc/Hz max. @ 100KHz   |
|   | -108 dBc/Hz max. @ 1 MHz   |
| <b>Rx</b>                                 |  |
| RF frequency                              | 17.20 - 22.20 GHz  |
| IF frequency                              | 950 to 1,950 MHz   |
| Local oscillator                          | 16.25, 16.8, 17.25, 17.4, 18.25, 19.25 and 20.25 GHz                 |
| M&C Interface                             | RS-232 and RS-485, Ethernet (HTTP and SNMP)                          |
| Noise figure                              | 1.5 dB max.  |
| Gain                                      | 55 dB typ.   |
| Gain flatness over any 1 GHz              | 4.5 dBpp   |
| Impedance SMA Connector                   | SMA, 2.92mm (50Ohms)   |
| Image rejection                           | 50 dB  |
| Power output P1dB                         | 10 dBm   |
| Phase noise                               | -78 dBc/Hz max. @ 1 KHz  |
| (Exceeds Intelsat's standard IESS308/309) | -83 dBc/Hz max. @ 10 KHz   |
|   | -94 dBc/Hz max. @ 100KHz   |
|   | -108 dBc/Hz max. @ 1 MHz   |
| L.O. leakage                              | -40 dBm  |
| <b>Common</b>                             |  |
| Operating voltage                         | 22-55 VDC  |
| Power consumption                         | 48W max.   |
| Temperature range (ambient)               | -40 deg C to +60 deg C   |
| operating                                 | -55 deg C to +85 deg C   |
| storage                                   |  |
| Dimensions & housing                      | 228 (L) x 227.9 (W) x 25 (H) mm<br>8.98" (L) x 8.97" (W) x 0.98" (H) |
| Weight                                    | 2.3 kg (5.07 lbs) max.   |