



3W Universal Ka-Band (27.5-31.0 GHz) BUC

KEY FEATURES

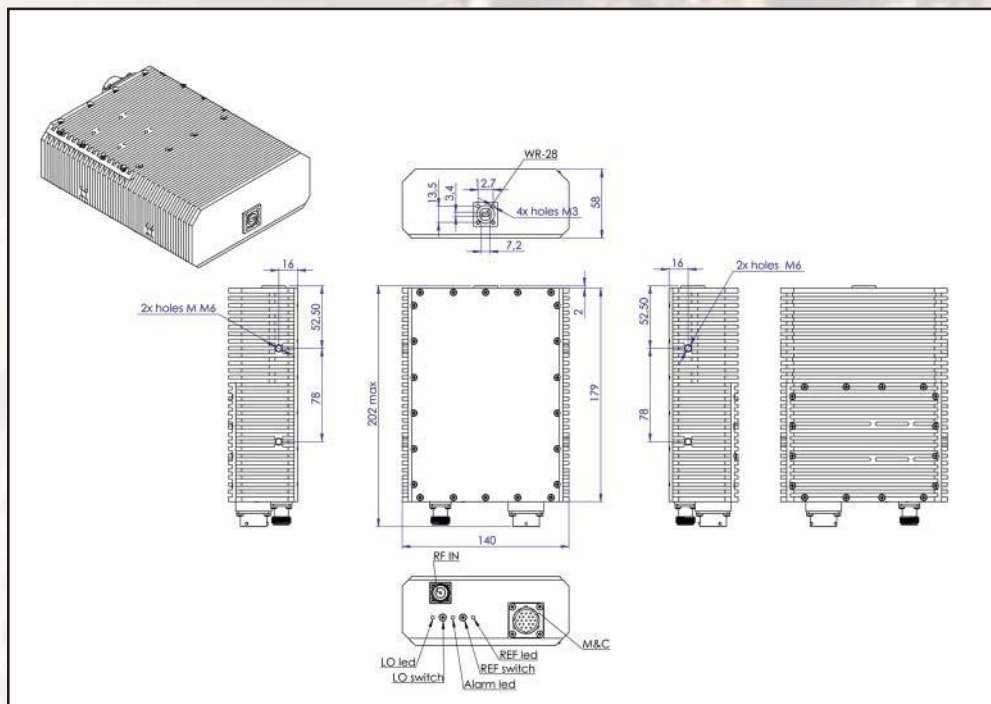
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad- L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (38W max)
- ◆ M&C - combined RS-232/485, FSK and Ethernet control (HTTP and SNMP)
- ◆ L.O. lock and amplifier LEDs
- ◆ Built-in redundancy option
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability reference autosensing and controlable (optional)
- ◆ RoHS compliant

ABE3UKA / ABE3UKAF



This unique first ever 3W L-To Full Ka-Band Block Up Converter covers the O3B (27.65-29.1 GHz), Commercial (29.0-30.0 GHz) and Military (30.0-31.0 GHz) frequency bands. M&C (FSK) capability enables trouble shooting, monitoring and controlling the BUC. Unit provides 10MHz reference autosensing feature.

Mechanical Drawing





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| TECHNICAL SPECIFICATIONS | |
|--|--|
| RF frequency | 27.5 - 31.0 GHz |
| Quad local oscillator | 26.55, 27.4, 28.05 and 29.05 GHz |
| IF frequency | 950 to 1,950 MHz |
| Output power | 3W (+35 dBm min.) |
| IF connector | N-type or F-type (field-exchangeable) |
| Power supply : auto-ranging via IF connector | +15 VDC ~ +60 VDC, 38W max. |
| Output interface | WR-28 G |
| Gain | 65 dB typ. 60 dB min. |
| IMD3 (two tones) | -25 dBc max. 2 signal 5 MHz apart at P-LINEAR |
| Spurious | -50 dBc max |
| Spectral regrowth (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power) | -30 dBc |
| Requirement for external reference: frequency input power | via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port |
| TX Gain variation | ± 0.5 dB over 40 MHz |
| TX Gain stability over temperature range | ± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max. |
| Phase noise (Exceeds Intelsat's standard IESS308/309) | -55 dBc/Hz max. @ 10 Hz |
| | -65 dBc/Hz max. @ 100 Hz |
| | -75 dBc/Hz max. @ 1 KHz |
| | -85 dBc/Hz max. @ 10 KHz |
| | -95 dBc/Hz max @ 100 KHz |
| | -115 dBc/Hz max @ 1 MHz |
| Noise power density | Transmit Receive |
| | -66 dBm/Hz (max) -157 dBm/Hz (max) |
| FSK | Multiplexed on TX IFL, compatible with Compech and Paradigm |
| M&C Interface | RS-232 and RS-485, Ethernet (HTTP and SNMP) |
| Noise figure | 15 dB max |
| Input V.S.W.R. | 1.5 : 1 max |
| Output V.S.W.R. | 1.5 : 1 max. |
| Mute | Shut off the HPA if L.O. unlocked |
| Status LED | RED |
| L.O. | GREEN GREEN GREEN BLINKING YELLOW YELLOW BLINKING |
| Internal 10MHz Auto-Detect | GREEN GREEN BLINKING |
| | SSPA MUTED SSPA OK All OK L.O. 26.55 GHz All OK L.O. 27.4 GHz All OK L.O. 28.05 GHz All OK L.O. 29.05 GHz EXTERNAL DETECTED ENABLED |
| Temperature range (ambient) | |
| operating | -40 deg C to +55 deg C |
| storage | -55 deg C to +85 deg C |
| Vibration and shock | Complies with MIL-STD-810E |
| Dimensions & housing | 170 (L) x 140 (W) x 58 (H) mm 7.04" (L) x 5.6" (W) x 2.3" (H) |
| Weight | 1.9 kg (4.1 lbs) max |