



10W Ext. Ku-Band Block Up Converter

KEY FEATURES

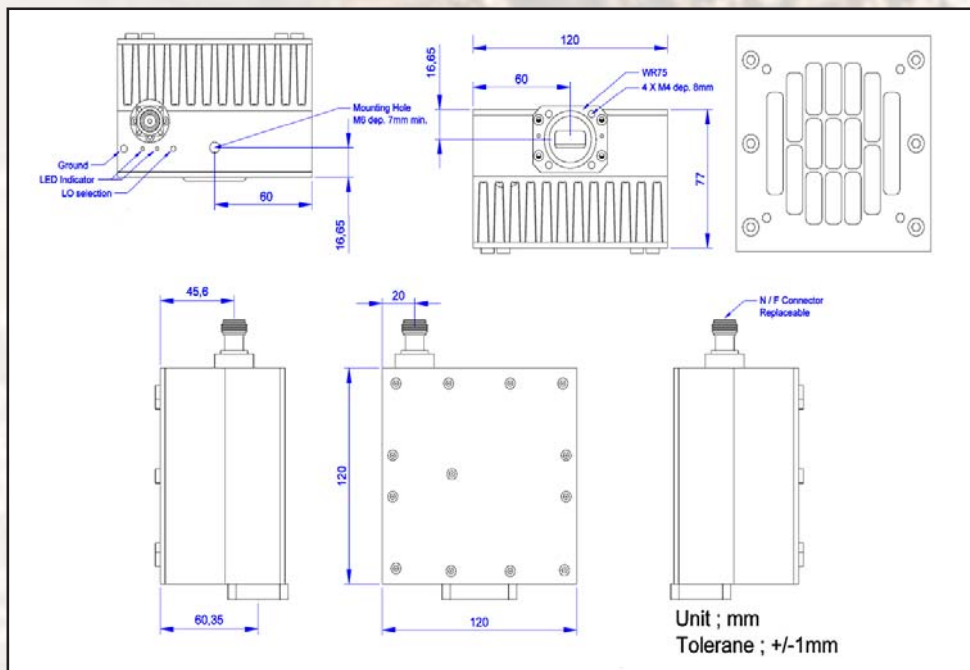
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 15-60 VDC
- ◆ Incomparable low power consumption (58W max) - can be powered by some iDirect or similar modems
- ◆ Digital temperature compensation
- ◆ L.O. lock and amplifier LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485, FSK, Ethernet (optional)
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ RoHS Compliant
- ◆ Three-year warranty

ABE10KFX / ABE10KFXF



This smallest and lightest 10W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., Field- Exchangeable connector and auto-ranging (24 or 48 VDC) powering features make unit universal for any Ku-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC. User can choose internal 10MHz high stability reference if the corresponding modulator does not provide it.

Mechanical Drawing





10W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS

| | |
|---|--|
| RF frequency | 13.75 to 14.50 GHz |
| Local oscillator - electronically and manually switchable | 13.05 GHz and 12.80 GHz |
| IF frequency | 950 to 1,700 MHz |
| Output power | 10W (+40 dBm min) 5W P-Linear (+37 dBm min) |
| IF connector | N-type or F-type (field-exchangeable) |
| Power supply - auto-ranging | +15~+60 VDC via IF cable, 58 W max |
| Internal 10MHz high stability reference | 10 ⁻⁸ |
| Output interface | WR-75 G |
| Gain | 60 dB min., 66 dB max |
| IMD3 | -28 dBc max |
| L.O. leakage | -45 dBm max |
| 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 |
| Gain variation over 40 MHz over 500 MHz | +/-1.5 dB +/-1.4 dB |
| Over operating temperature | +/-1.3 dB @ fixed frequency |
| Requirement for external reference frequency input power | via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port |
| Phase noise (Exceeds Intelsat's standard IESS308/309) | -53 dBc/Hz max. @ 10 Hz -63 dBc/Hz max. @ 100 Hz -73 dBc/Hz max. @ 1 KHz -83 dBc/Hz max. @ 10 KHz -93 dBc/Hz max. @ 100 KHz -113 dBc/Hz max @ 1 MHz |
| Noise power density Transmit Receive | -60 dBm/Hz (max) -151 dBm/Hz (max) |
| Noise figure | 20 dB max |
| Input V.S.W.R. | 2 : 1 max |
| Output V.S.W.R. | 2 : 1 max. |
| Mute | Shut off the BUC in case of L.O. unlocked |
| M&C | RS-232 and RS-485, Ethernet |
| FSK | Multiplexed on TX IFL, compatible with Comtech and Paradigm |
| Status LED RED GREEN YELLOW YELLOW blinking | Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz |
| Temperature range (ambient) operating storage | -40 deg C to +55 deg C -55 deg C to +85 deg C |
| Vibration and shock | Complies with MIL-STD-810E |
| Dimensions & housing | 120 (L) x 120 (W) x 77 (H) mm 4.72" (L) x 4.72" (W) x 3.28" (H) |
| Weight | 1.4 kg (3.0 lbs) max |