



8W Ext. C-Band 5.85-6.725 GHz Block Up Converter

KEY FEATURES

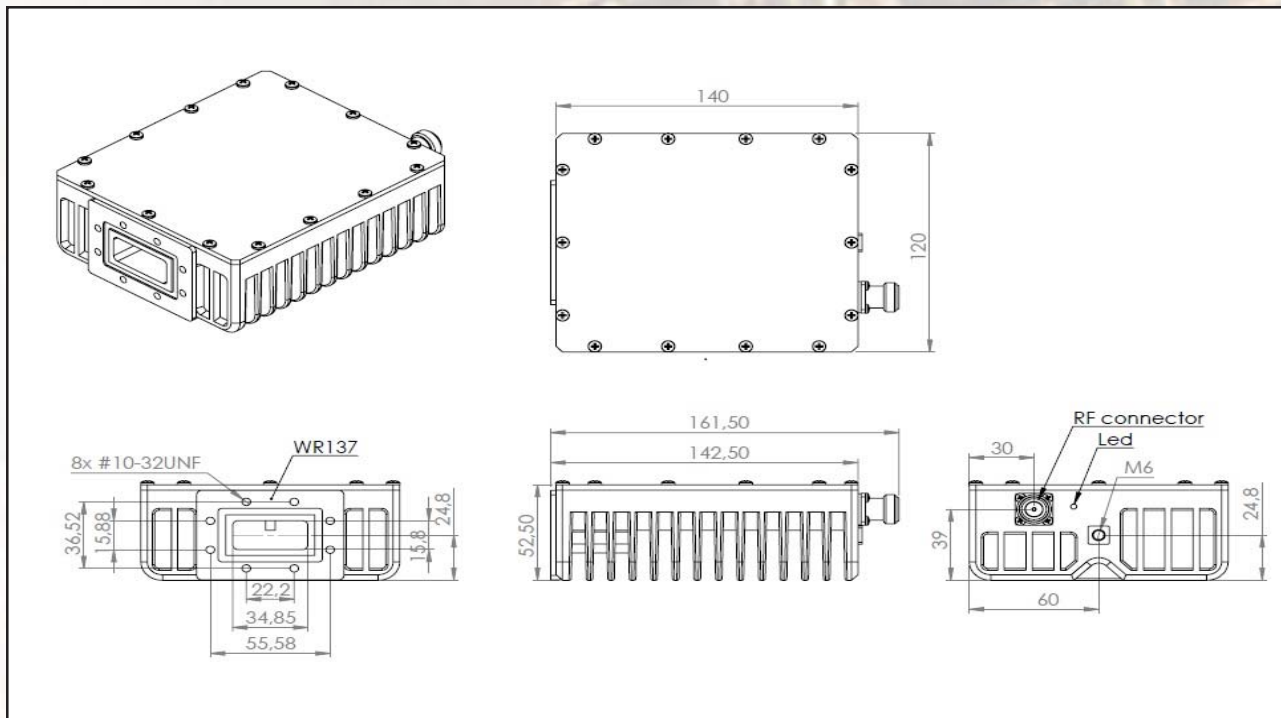
- ◆ 5.85 GHz - 6.725 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Local oscillator 4.9 GHz
- ◆ Incomparable low power consumption (28 W max)
- ◆ Auto-ranging 15-60 VDC powering option
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Advanced M&C interface - combined RS-232/485 + optional FSK
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ RoHS compliant
- ◆ Three-year warranty

ABE8DC / ABE8DCF



This smallest and lightest 8W L-To C-Band Block Up Converter is based on GaN technology. It is designed to be mounted on the feed horn. High power efficiency resulting in low current (<1.15amps @ 24VDC). The unit covers C-Band sub-bands: Standard (5.85-6.425 GHz) and Palapa (6.365-6.725 GHz).

Mechanical Drawing





8W Ext. C-Band 5.85-6.725 GHz Block Up Converter

| TECHNICAL SPECIFICATIONS | |
|---|---|
| RF frequency | 5.850 to 6.725 GHz |
| Local oscillator | 4.90 GHz |
| IF frequency | 950 to 1,825 MHz |
| Output power | 8W (+39 dBm min.) |
| IF connector | N-type or F-type (field-exchangeable) |
| Power supply : auto-ranging via IF connector | 15-60 VDC, 28 W max |
| Output interface | CPR 137 G |
| Internal 10MHz high stability reference | 10 ⁻⁸ |
| Gain | 65 dB nominal |
| IMD3 (two tones) | -26 dBc max. 2 signal 5MHz apart at P-LINEAR |
| 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) | -30dBc |
| 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 40MHz ± 1.8 dB over full band |
| TX Gain stability over temperature range | ± 1.5 dB typ., ± 1.8 dB max. |
| 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 -66 dBm/Hz (max) Receive -157 dBm/Hz (max) |
| M&C Interface | RS-232 and RS-485 |
| FSK | Multiplexed on TX IFL, compatible with Comtech and Paradigm |
| Noise figure | 15 dB max |
| Input V.S.W.R. | 2 : 1 max |
| Output V.S.W.R. | 2 : 1 max. |
| Mute | Shut off the HPA if L.O. unlocked |
| Status LED | RED Summary alarm GREEN All OK YELLOW All OK standard L.O. 4.90 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 | 140 (L) x 120 (W) x 52.5 (H) mm 5.51" (L) x 4.72" (W) x 2.06" (H) |
| Weight | 1.0 kg (2.2 lbs) max |