10W Universal Ka-Band (27.5-31.0 GHz) BUC

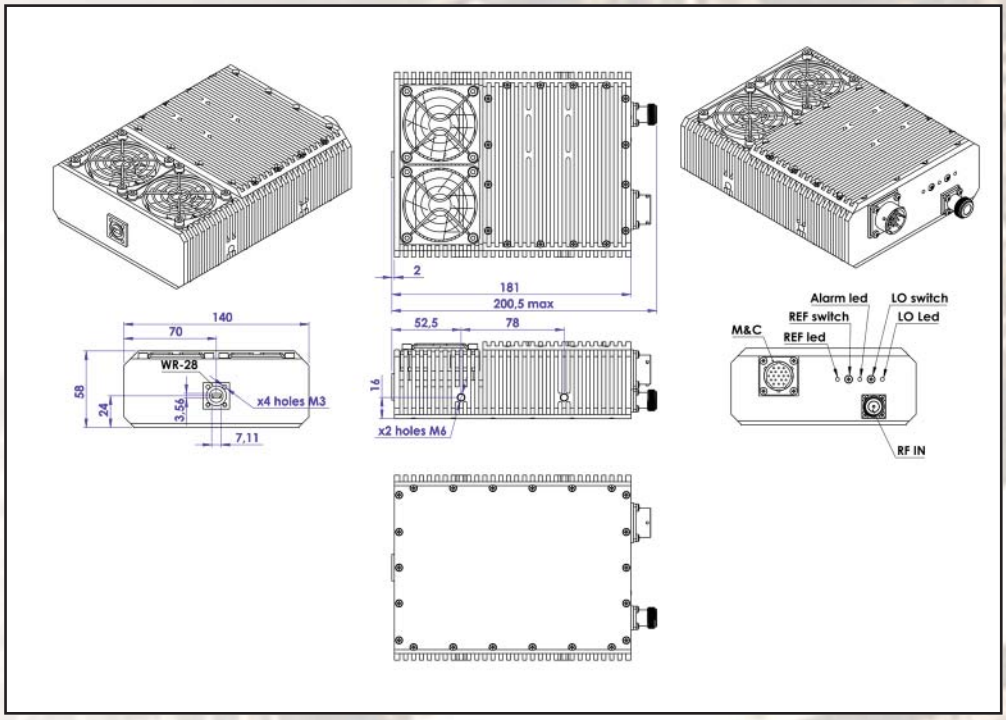
KEY FEATURES

- Output frequency 27.5-31.0 GHz
- Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- Quad- L.O. (electronicaly and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- Low power consumption (110W max)
- M&C - combined RS-232/485, FSK (optional), Ethernet (optional)
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- Internal 10MHz high stability 10^{-8} reference autosensing and controlable (optional)
- RoHS compliant
- Three-year warranty

ABE10UKA / ABE10UKAF

This unique first ever 10W 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 5.50 GHz
IF frequency	950 to 1,950 MHz
Output power	10W (+40 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector	+15 VDC ~ +60 VDC, 110W max.
Output interface	WR-28 G
Internal 10MHz high stability reference	10^{-8}
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 **TX Gain stability over temperature range**	**± 0**.5 dB over 40 MHz **± 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
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** **GREEN** **L.O.** **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 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	181 (L) x 140 (W) x 58 (H) mm 7.2" (L) x 5.6" (W) x 2.3" (H)
Weight	1.9 kg (4.1 lbs) max