



## 40W Universal Ka-Band (27.5-31.0 GHz) BUC

### KEY FEATURES

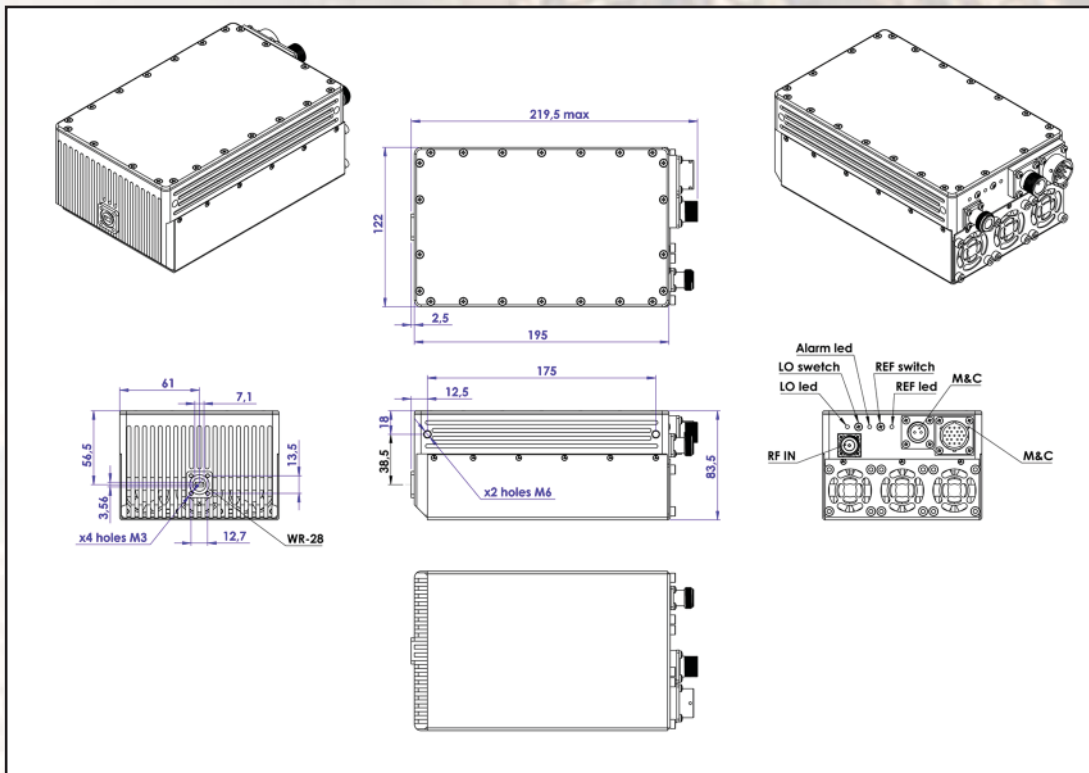
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad- L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (340W max)
- ◆ M&C - combined RS-232/485, FSK (optional), 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

### ABC40UKA / ABC40UKAF



This unique first ever 40W 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





## 40W Universal Ka-Band (27.5-31.0 GHz) BUC

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		40W (+46 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		+36 VDC ~ +60 VDC, 340W max.
Output interface		WR-28 G
Internal 10MHz high stability reference		10 <sup>-8</sup>
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		<b>via IF cable</b> 10 MHz (sine-wave) -5 to +5 dBm @ input port
TX Gain variation		± 0.5 dB over 40 MHz ± 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)		-55 dBc/Hz max. @ 10 Hz -65 dBc/Hz max. @ 100 Hz -78 dBc/Hz max. @ 1 KHz -85 dBc/Hz max. @ 10 KHz -95 dBc/Hz max @ 100 KHz -112 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	SSPA MUTED SSPA OK
L.O.	GREEN GREEN BLINKING YELLOW YELLOW BLINKING	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
Internal 10MHz Auto-Detect	GREEN GREEN BLINKING	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		195 (L) x 122 (W) x 83.5 (H) mm 7.67" (L) x 4.8" (W) x 3.2" (H)
Weight		2.8 kg (6.17 lbs) max