



100W Universal Ka-Band (27.5-31.0 GHz) BUC

KEY FEATURES

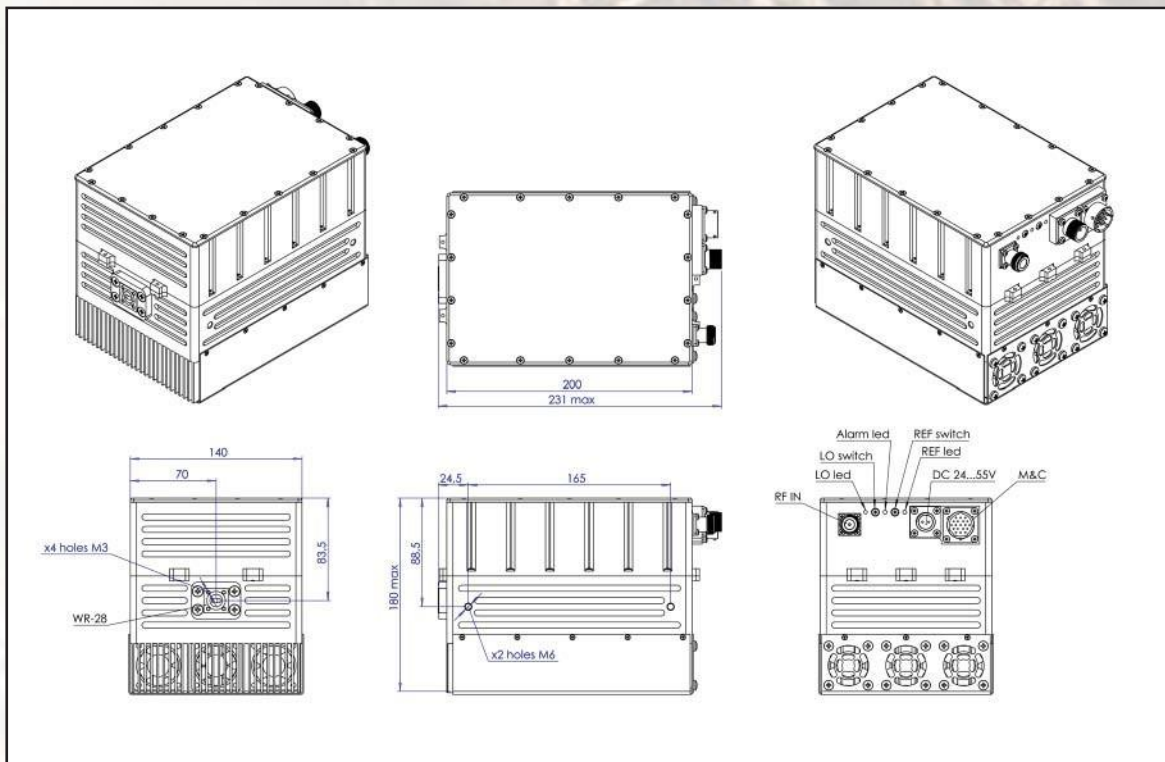
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad- L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (990W max)
- ◆ M&C - combined RS-232/485, FSK and Ethernet control (HTTP and SNMP)
- ◆ L.O. lock, amplifier and 10MHz LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability reference autosensing and controllable (optional)
- ◆ RoHS compliant

ABD100UKA/ ABD100UKAF



This unique first ever 100W 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		100W (+50 dBm min.) 57W (+47.56 dBm min.) P-linear
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via MS connector		+90 ~ +220 VAC, 990W max.
Output interface		WR-28G
Linear Gain		72 typ.
IMD3 (two tones)		-25 dBc max. 2 signal 5 MHz apart at P-LINEAR
Spurious		-55 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 ± 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)		-52 dBc/Hz max. @ 10 Hz -62 dBc/Hz max. @ 100 Hz -72 dBc/Hz max. @ 1 KHz -82 dBc/Hz max. @ 10 KHz -92 dBc/Hz max @ 100 KHz -102 dBc/Hz max @ 100 KHz
Noise power density	Transmit Receive	-60 dBm/Hz (max) -150 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 L.O. LED	GREEN GREEN blinking YELLOW YELLOW blinking GREEN GREEN blinking RED	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 ALL OK MUTE ALARM
Status ALARM LED	GREEN GREEN blinking RED	EXTERNAL 10 MHz DETECTED INTERNAL 10 MHz DETECTED NO EXTERNAL REFERENCE
Status REF LED	GREEN GREEN blinking RED	
Temperature range (ambient)		
operating		-40 deg C to +60 deg C
storage		-55 deg C to +85 deg C
Vibration and shock		Complies with MIL-STD-810E
Dimensions & housing		225 (L) x 200 (W) x 190 (H) mm 8.85" (L) x 7.87" (W) x 7.48" (H)
Weight		14.5 kg (32 lbs) max

