



20W Universal Ka-Band (27.5-31.0 GHz) BUC

KEY FEATURES

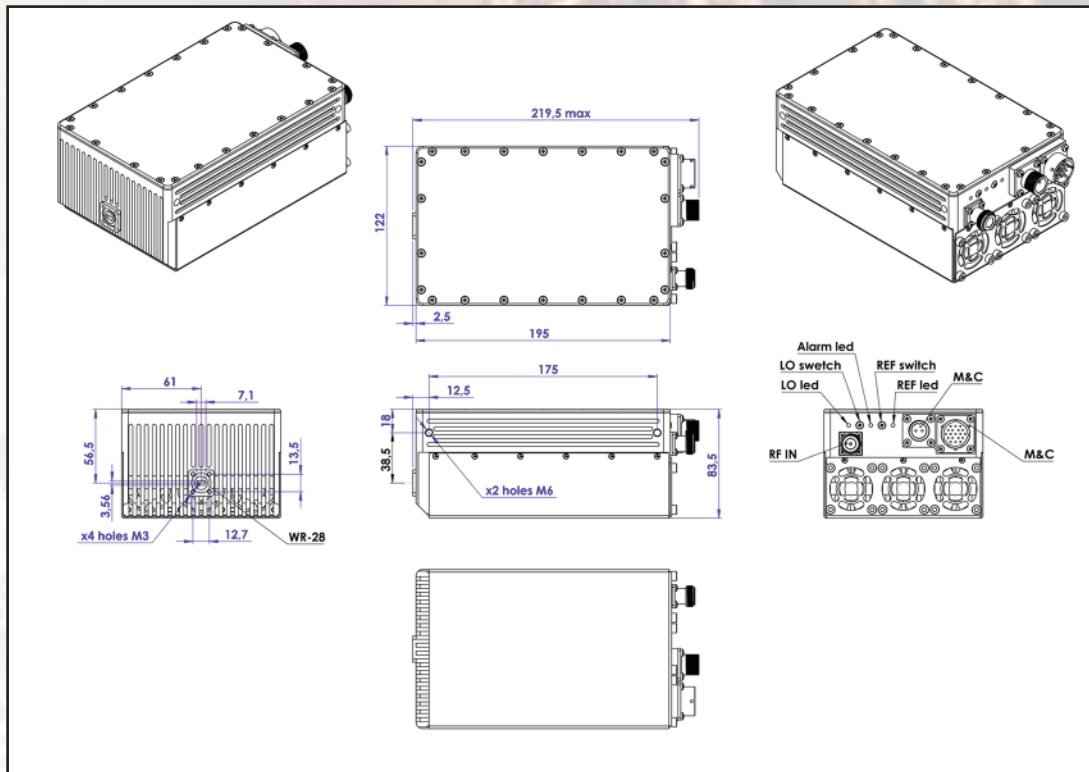
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad- L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (260W max)
- ◆ M&C - combined RS-232/485, FSK (optional), 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

ABC20UKA / ABC20UKAF



This unique first ever 20W 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





20W 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	20W (+43 dBm min.)	
IF connector	N-type or F-type (field-exchangeable)	
Power supply : auto-ranging via IF connector	+36 VDC ~ +60 VDC, 260W 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	± 0.5 dB over 40 MHz	
TX Gain stability over temperature range	± 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	
	-78 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	-66 dBm/Hz (max)	
Transmit Receive	-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	SSPA MUTED	
L.O.	SSPA OK	
	All OK L.O. 26.55 GHz	
	All OK L.O. 27.4 GHz	
	All OK L.O. 28.05 GHz	
Internal 10MHz Auto-Detect	All OK L.O. 29.05 GHz	
	EXTERNAL DETECTED	
	ENABLED	
Temperature range (ambient)		
	operating	-40 deg C to +55 deg C
	storage	-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	