

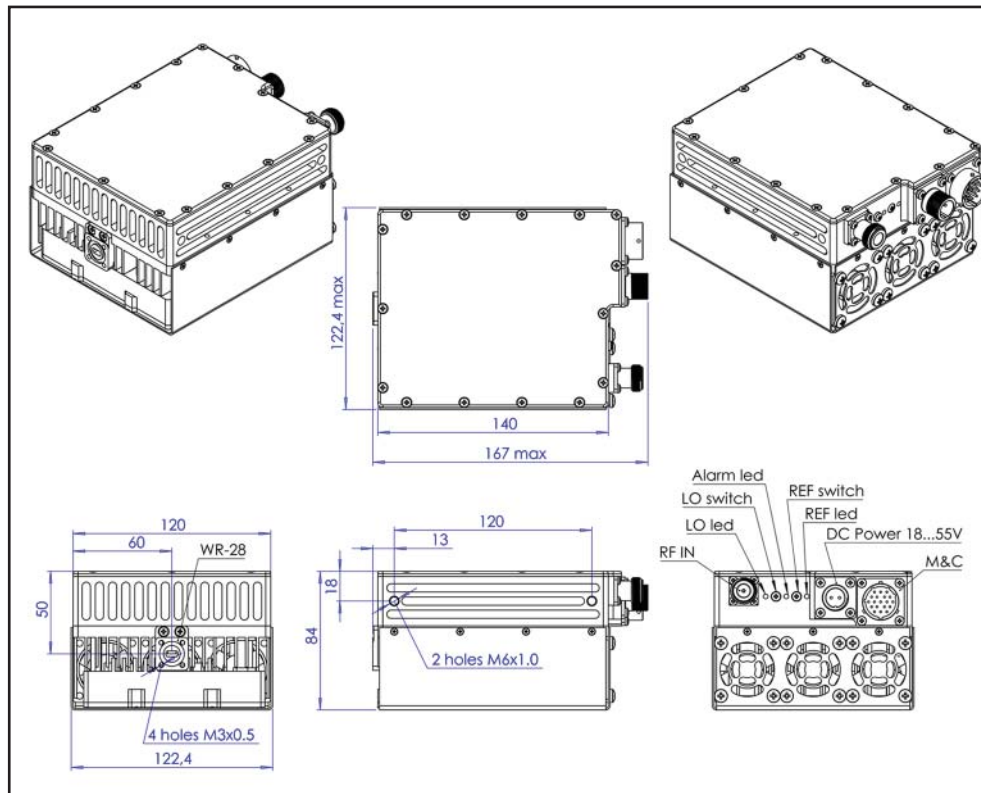


20W Universal Ka-Band (27.5-31.0 GHz) BUC

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)
- ◆ Advanced M&C interface - combined RS-232/485, Ethernet (HTTP and SNMP ver. 3) and optional FSK
- ◆ L.O. lock, amplifier and 10MHz LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability reference autosensing and controlable (optional)
- ◆ Built-in redundancy option
- ◆ RoHS compliant

Mechanical Drawing



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.



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 29.05 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
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	-157 dBm/Hz (max)
Receive	
FSK	Multiplexed on TX IFL, compatible with Compech and Paradigm
M&C Interface	RS-232 and RS-485 and Ethernet (HTTP and SNMP ver. 3)
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
	SSPA OK
L.O.	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	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	140 (L) x 122.4 (W) x 84 (H) mm 5.5" (L) x 4.8" (W) x 3.3" (H)
Weight	2.2 kg (4.85 lbs) max