



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

### KEY FEATURES

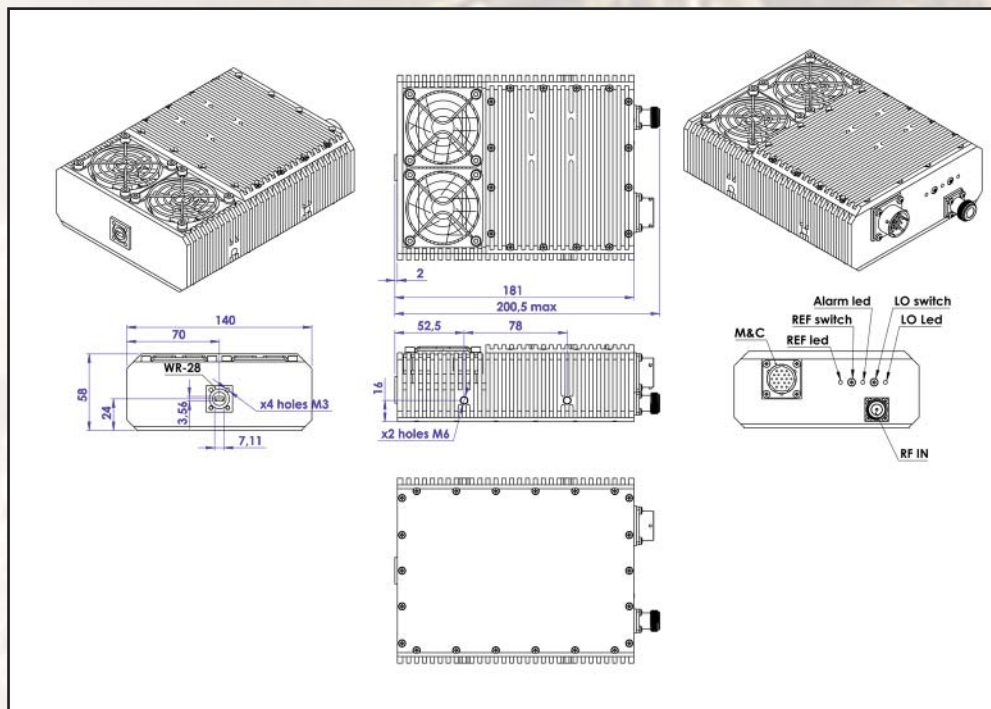
- ◆ Output frequency 27.5-31.0 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Quad- L.O. (electronically and manually switchable 26.55, 27.4, 28.05, and 29.05 GHz)
- ◆ Low power consumption (110W max)
- ◆ M&C - combined RS-232/485, FSK (optional), 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	
<b>RF frequency</b>	27.5 - 31.0 GHz
<b>Quad local oscillator</b>	26.55, 27.4, 28.05 and 5.50 GHz
<b>IF frequency</b>	950 to 1,950 MHz
<b>Output power</b>	10W (+40 dBm min.)
<b>IF connector</b>	N-type or F-type (field-exchangeable)
<b>Power supply : auto-ranging via IF connector</b>	+15 VDC ~ +60 VDC, 110W max.
<b>Output interface</b>	WR-28 G
<b>Internal 10MHz high stability reference</b>	10 <sup>-8</sup>
<b>Gain</b>	65 dB typ. 60 dB min.
<b>IMD3 (two tones)</b>	-25 dBc max. 2 signal 5 MHz apart at P-LINEAR
<b>Spurious</b>	-50 dBc max
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30 dBc
<b>Requirement for external reference:</b> frequency input power	<b>via IF cable</b> 10 MHz (sine-wave) -5 to +5 dBm @ input port
<b>TX Gain variation</b>	± 0.5 dB over 40 MHz
<b>TX Gain stability over temperature range</b>	± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max.
<b>Phase noise</b>  (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
<b>Noise power density</b>	-66 dBm/Hz (max)
<b>Transmit</b>	-157 dBm/Hz (max)
<b>Receive</b>	
<b>FSK</b>	Multiplexed on TX IFL, compatible with Compech and Paradigm
<b>M&amp;C Interface</b>	RS-232 and RS-485
<b>Noise figure</b>	15 dB max
<b>Input V.S.W.R.</b>	2 : 1 max
<b>Output V.S.W.R.</b>	2 : 1 max.
<b>Mute</b>	Shut off the HPA if L.O. unlocked
<b>Status LED</b>	SSPA MUTED
	SSPA OK
<b>L.O.</b>	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
<b>Internal 10MHz Auto-Detect</b>	EXTERNAL DETECTED
	ENABLED
<b>Temperature range (ambient)</b>	
operating	-40 deg C to +55 deg C
storage	-55 deg C to +85 deg C
<b>Vibration and shock</b>	Complies with MIL-STD-810E
<b>Dimensions &amp; housing</b>	181 (L) x 140 (W) x 58 (H) mm
	7.2" (L) x 5.6" (W) x 2.3" (H)
<b>Weight</b>	1.9 kg (4.1 lbs) max