



100W Ext. Ku-Band Block Up Converter

KEY FEATURES

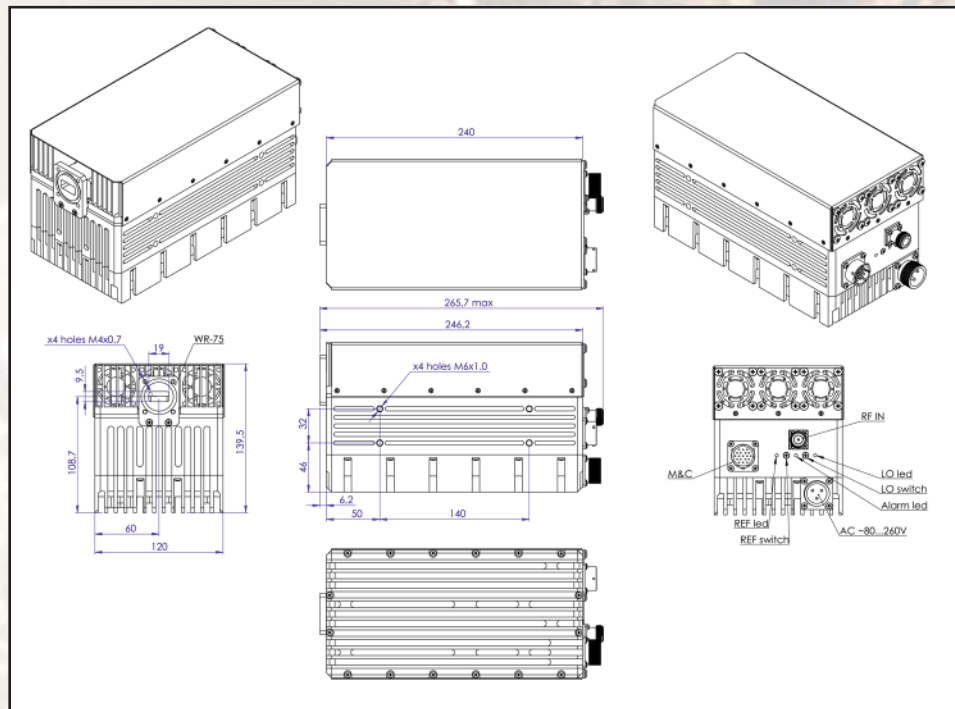
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double- L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (497W typ.)
- ◆ Auto-ranging powering option 36 - 58 VDC
- ◆ Extreme P-Out GaN linearity (47 dBm)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal auto-sensing and controllable 10MHz high stability reference
- ◆ Built-in redundancy option
- ◆ M&C - combined RS-232/485 and optional FSK
- ◆ Ethernet control (HTTP and SNMP)
- ◆ RoHS compliant

ABC100KX / ABC100KXF



This smallest and lightest 100W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., field-exchangeable connector, auto-sensing and controllable internal 10 MHz reference, and auto-ranging 48 VDC powering features make this unit universal for any Ku-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC.

Mechanical Drawing





100W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		14.00 to 14.50 GHz 13.75 to 14.50 GHz
Dual local oscillator		13.05 GHz and 12.80 GHz
IF frequency		950 to 1,700 MHz
Output power		100W (+50 dBm min.) 50W (+47 dBm min.) P-Linear
IF connector		N-type or F-type (field-exchangeable)
Power supply auto-ranging		+36 ~ +58 VDC via MS connector, 497W typ.
Output interface		WR-75 G
Gain		68 dB min., 72 dB nominal
IMD3 (two tones)		-26 dBc max. 2 signal 5 MHz apart at P-LINEAR
L.O. leakage		-45 dBm max
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:		via IF cable
frequency		10 MHz (sine-wave)
input power		-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		-55 dBc/Hz max. @ 10 Hz
(Exceeds Intelsat's standard IESS308/309)		-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
Noise power density	Transmit	-80 dBm/Hz (max)
	Receive	-125 dBm/Hz (max)
Noise figure		15 dB max
Input V.S.W.R.		2 : 1 max
Output V.S.W.R.		2 : 1 max.
M&C		RS-232 and RS-485, Ethernet (HTTP and SNMP), FSK
Mute		Shut off the HPA if L.O. unlocked
Status LED		
Amplifier	RED	Summary alarm
	GREEN	All OK
L.O.	GREEN	All OK standard L.O. 13.05 GHz
	GREEN blinking	All OK extended L.O. 12.80 GHz
10MHz	GREEN	External 10MHz reference
	GREEN blinking	Internal 10MHz reference
	RED	No 10MHz reference detected
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		246.2 (L) x 120 (W) x 139.5 (H) mm 9.84" (L) x 4.72" (W) x 5.5" (H)
Weight		7.53 kg (16.0 lbs) max