

# 12-40 W Compact X-BAND BUC

DATASHEET



## ALGA LOW COST COMPACT X-BAND BUC

The Alga low cost Compact X-band BUC is built for VSAT stabilized platforms and mobile stations, while also offering benefits for fixed site and offshore applications. Weighing less than 7.5 lbs, makes it ideal for feed mounting.

### KEY FEATURES

- From 12 W to 40 W of available Power
- From 6 W to 20 W of Linear power
- Built-in Telemetry for critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- WEB interface, SNMP monitoring, RS 485, RS232, Ethernet and dry-contacts M&C Interface
- 1:1 switching logic built into the BUC eliminating expensive external controller (Optional)
- IP65 rated housing and Fan (weather proof construction)



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# Compact X-BAND BUC Specifications

ELECTRICAL CHARACTERISTICS					
	12 W	20 W	30 W	40 W	40W GaN
RF Output at P1 dB	41 dBm	43 dBm	45 dBm	46 dBm	N/A
RF Output at P Sat	41.5 dBm	43.5 dBm	45 dBm	46.5 dBm	46 dBm
RF Output at P Lin	38 dBm	40 dBm	42 dBm	43 dBm	43 dBm
Output Frequency Range	7.9 – 8.4 GHz				
Input Frequency Range	950 - 1450 MHz				
Local Oscillator Frequency	6.95 GHz				
Gain Stability Over Temperature	± 2 dB nominal; ± 2.0 dB max				
Gain Variation at fixed temperature	± 2.0 dB over full band; ± 0.5 dB over 40 MHz				
Linear Gain	60 dB nominal				
Gain Control	20 dB Nominal In 0.5 dB Steps				
Output VSWR	1.50:1				
Intermodulation	-25 dBc, with 2 equal carriers at 3dB total power back off from rated P1dB				
10 MHz Reference	0 dBm ± 5.0 dB				
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz
10 MHz Phase Noise Requirement		-140 dBc/Hz max	-150 dBc/Hz max	-155 dBc/Hz max	
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 dBc/Hz max	-103 dBc/Hz max
Output Spurious	-55 dBc max.				
Input Impedance	50 Ohms				
Input VSWR	1.50:1				
Power consumption (at rated power)	100 W	130 W	175 W	240 W	210 W
	+18 to +36 VDC Or +36 to +72 VDC	+18 to +36 VDC Or +36 to +72 VDC	+18 to +36 VDC Or +36 to +72 VDC	+18 to +36 VDC Or +36 to +72 VDC	+18 to +36 VDC Or +36 to +72 VDC
Power requirement					
INTERFACE					
Output Interface	Waveguide, WR137G (Grooved)				
Input Interface	N-Type Female, 50 Ohms				
Connectors	DC: MS3102R14S-9P	M&C: MS3112E14-19P	Redundancy: 3112E14-15P (Optional)		
MECHANICAL					
Cooling	Forced Air				
Dimensions (L x W x H)	7.5 x 4.72 x 4.5 in (190 x 120 x 114 mm)				
Weight	7.5 lbs (3.4 kg)				
ENVIRONMENTAL					
	Temperature Range (ambient)		Humidity		Altitude
	-40°C to +55°C (operating); -40°C to +75°C (storage)		0 to 100% (condensing)		10,000 ft ASL

**ORDERING INFORMATION** To place an order, build your specific X-BAND BUC by specifying the following in your ordering number:

Ordering Number: ALTX – AAAABBY – 60 – 11 – 4CC – XXXX

AAAA: Band	BBY: RF Power Level	CC: DC Supply	XXXX: Options
7984 X Band	41 (12 W GaAs) 43 (20 W GaAs) 45 (30 W GaAs) 46 (40 W GaAs) 46G (40 W GaN)	24 (18 – 36 VDC) 48 (36 – 72 VDC)	1050 M&C 1051 M&C and Redundant Ready

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