

25-40W KU-BAND ONE-BOX-DESIGN BUC



SATELLITE COMMUNICATIONS

EVEN MORE POWER FOR YOUR BUC

The new generation of Mitec VSAT Block Up-Converters comes with an integrated BUC/Booster package and designed for high efficiency resulting in an optimal compact form factor and lightweight with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy from a web browser.

Firmware version: 216142-001
Revision: 01

BLOCK UP CONVERTERS AND REDUNDANT SYSTEMS

HOME CONFIG HELP

Main Alarm Log

Uplink
Downlink
BUC Standalone
BUC A
BUC B

Status	
Output power	46.2 dBm
Temperature	52.5 °C
Input voltage	47.8 VDC
Gain	72 dB
Mute	Unmuted
Summary alarm	OK

Controls	
Mute	<input type="radio"/> Mute <input checked="" type="radio"/> Unmute <input type="button" value="Set"/>
Gain	<input type="text" value="72"/> dB <input type="button" value="Set"/>

Alarm Details	
Out of lock	OK
Temperature	OK
Input voltage	OK
Power supply	OK

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KEY FEATURES

- Compact size and light weight
- Best in Class efficiency with less than 350 W draw for 40W Output
- Easy to install
- Available in standard and extended bands
- High thermal dissipation efficiency resulting in "Best in Class" Mean Time Before Failure (MTBF)
- Superior phase noise, exceeding IESS 308 /309
- 1:1 switching logic built into the BUC eliminating expensive external controller
- Built-in telemetry facilities for RF power detection, mute control, over temperature shutdown, summary alarm
- HTTP Hosting
- SNMP
- RS485, RS232, Ethernet and Dry-Contacts M&C interface

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25-40 W KU-BAND BUC

TRANSMIT CHARACTERISTICS	25 W	40 W
Output Frequency Range	Standard Band: 14.00-14.50 GHz, Extended Band: 13.75-14.50 GHz	
Input Frequency Range	Standard Band: 950-1450 MHz, Extended Band: 950-1700 MHz	
Local Oscillator Frequency	Standard Band: 13.05 GHz, Extended Band: 12.80 GHz	
Conversion Type	Single stage, Non-inverting	
RF Output at 1 dB GCP	+44 dBm min.	+46 dBm min., Standard Band +45.5 dBm min, Extended Band
Output VSWR	1.20:1.	
Linear Gain	70 dB min.	
User Adjustable Gain	15 dB in 0.1 dB steps	
Gain Stability Over Temperature	± 1.5 dB nominal; ± 2.0 dB max.	
Gain Variation at fixed temperature	Standard Band: ± 0.5 dB over max over 36 MHz; ± 2.0 dB over full band Extended Band: ± 0.7 dB over max over 36 MHz; ± 2.25 dB over full band	
Intermodulation	-25 dBc, with 2 equal carriers at 3 dB total power backoff from rated power	
10 MHz Reference (via IF connector)	0 dBm ±0.5 dB, (Internal reference: optional)	
Phase Noise Requirements:	-135 dBc/Hz max @ 100 Hz, -140 dBc/Hz max @ 1 KHz, -143 dBc/Hz max @ 10 KHz; -143 dBc/Hz max @ 100 KHz	
Local Oscillator Phase Noise	-63 dBc/Hz max @ 100 Hz, -73 dBc/Hz max @ 1 KHz, -83 dBc/Hz max @ 10 KHz, -93 dBc/Hz max @ 100 KHz, -103 dBc/Hz max @ 1 MHz	
Output Spurious	-55 dBc max.; -70 dBm max over receive band 10.95-12.75 GHz	
Receive Band Noise Power Density	-150 dBm/Hz max.	
Input Impedance	50 Ohms	
Input VSWR	1.50:1	
DC Power Requirements	+36 to +55 VDC	
Power Consumption (at rated power)	270W typ.	350W typ.; 260W at 3 dB backoff

INTERFACE

Output Interface	Waveguide, WR75-G (Grooved)
Input Interface	N-Type Female, 50 Ohms
DC Power Connector	MS Connector
M&C (RS485/RS232/Ethernet)	MS Connector
RF Sample Port	N-Type Female

MECHANICAL

Cooling	Forced Air
Dimensions (L x W x H)	9.0 x 5.5 x 7.0 inches (11.8 x 5.5 x 7.0 inches with the W/G Circulator) (229 x 140 x 178 mm)
Weight	15 lbs (6.8 kg)

ENVIRONMENTAL

Temperature Range (ambient)	-40°C to + 50°C (operating); -40°C to + 75°C (storage)
Humidity	0 to 100% (condensing)
Altitude	10,000 ft ASL

ORDERING INFORMATION

Standard Band, Ext. Ref.	MTX-14014544-70-ES-40	MTX-14014546-70-ES-40
Standard Band, Int. Ref.	MTX-14014544-70-ES-47	MTX-14014546-70-ES-47
Extended Band, Ext. Ref.	MTX-13714544-70-ES-40	MTX-13714546-70-ES-40
Extended Band, Int. Ref.	MTX-13714544-70-ES-47	MTX-13714546-70-ES-47

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