



25W Ku-Band Block Upconverter

MODEL: UC-1414A5-4470



DESCRIPTION

The Ku-Band high power block upconverter (BUC) is an RF subsystem for Airborne SatCom up-link applications. It converts the L-Band RF signal from a data modem on the aircraft to the Ku-Band frequency, and boosts the signal to a needed power level for transmission through an airborne antenna.

The BUC communicates with a controller via a serial monitor and control (M&C) interface.

The unit interfaces to the aircraft +28 V_{DC} bus for primary power.

Specifications Subject to Change without Notice
Errors & Omissions Excepted

ELECTRICAL

Input Frequency Range:	950 to 1450 MHz
Output Frequency Range:	14.0 to 14.5 GHz
Output Power @ 1dB GCP:	25 Watt (+44 dBm) typ.
3 rd Order IMD @ 3dB Total Power Back-off:	-26 dBc typ.
Linear Gain Range:	70 ± 2 dB
Gain Flatness over Full Band:	±1.5 dB max. peak-to-peak
Gain Flatness over any 40MHz:	±0.25 dB max. peak-to-peak
Input VSWR:	1.5 : 1 max.
Output VSWR:	1.5 : 1 max.
Output Spurious, In-band and Signal Related:	-50 dBc typ.
Output SSB Phase Noise	-60 dBc/Hz @ 100 Hz -70 dBc/Hz @ 1 kHz -80 dBc/Hz @ 10 kHz -90 dBc/Hz @ 100 kHz -120 dBc/Hz @ 1 MHz
Output Mute:	60 dB min. on command & unit fault
External Reference Embedded at the IF Input:	10 MHz, +6 to +10 dBm
Monitoring / Control:	RX-232 standard, 100 Base-T Ethernet optional
+28VDC Input Power:	250 W max.

MECHANICAL

IF Input Connector:	SMA FEMALE JACK
RF Output Connector:	N-TYPE FEMALE JACK
DC Power Input / M&C:	22-pin MIL-DTL-38999 Series III, P/N: D38999/20FC35PN
Dimensions (including connectors and mounting tabs):	12.0" × 8.5" × 3.1"
Weight:	13 lb max.

ENVIRONMENTAL

Operating Temperature:	-55 to +71 °C (10 minutes warm-up at cold start and fan cooled at high temp.)
Humidity	5% to 90% non-condensing
Altitude	0 to 35,000 ft.

OTHER MODEL AVAILABLE

Response, Innovation, Craftsmanship

200 Edgeley Boulevard, Unit #24-27, Concord, Ontario, CANADA L4K 3Y8

Tel: (905) 660-0405 Fax: (905) 660-0406

e-mail: sales@itselectronics.com www.itselectronics.com