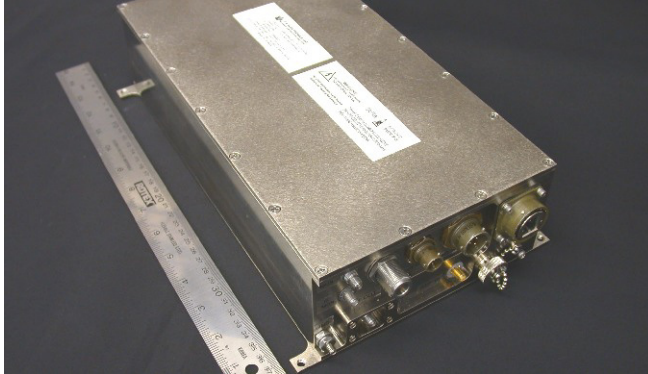




Block Upconverters for Satellite Earth Stations



These block upconverters provide a frequency translation of an L-band input to a C to Ka-band output.

FEATURES:

- High linearity.
- Low phase noise.
- Outdoor antenna hub mount suitable for severe environments.
- Automatically operate from the internal reference when the external reference is not present.

Model Number	Input Frequency (MHz)	Output Frequency (GHz)	Output Connector Type
UC-6A426A67-1530	950 to 1,200	6.425 to 6.675	SMA Female
UC-13A7514A50-1530	950 to 1,700	13.75 to 14.50	SMA Female
UC-17A317A8-1330	950 to 1,450	17.30 to 17.80	3.5mm Female
UC-17A318A1-1330	950 to 1,750	17.30 to 18.10	3.5mm Female
UC-19A520A3-1530	950 to 1,750	19.50 to 20.30	3.5mm Female
UC-24A7525A25-1530	950 to 1450	24.75 to 25.25	WR-34 Grooved
UC-28A328A6-1530	950 to 1,200	28.35 to 28.60	WR-28 Grooved
UC-28A4029A15-1530	1000 to 1750	28.40 to 29.15	WR-28 Grooved
UC-29A1529A85-1530	950 to 1650	29.15 to 29.85	WR-28 Grooved
UC-29A229A5-1530	1200 to 1450	29.25 to 29.50	WR-28 Grooved
UC-29A230A0-1530	950 to 1,700	29.25 to 30.0	WR-28 Grooved
UC-29A530A0-1530	950 to 1450	29.5 to 30.0	WR-28 Grooved

Other frequency bands available. Contact ITS for details.



Block Upconverters for Satellite Earth Stations

INTERFACE

IF INPUT CHARACTERISTICS:

Frequency	See Model Number Table
Return Loss (50 Ohm)	20 dB Typical, 18 dB Minimum

RF OUTPUT CHARACTERISTICS:

Frequency	See Model Number Table
Return Loss (WR-28)	20 dB Typical, 18 dB Minimum
P1dB @ Min. Attenuation	+15 dBm Minimum
IP3 @ Min. Attenuation	+23 dBm Minimum
Output Monitor Level	-20 $\pm$ 2 dB

EXTERNAL REFERENCE INPUT:

Frequency	10 MHz
Power Level	-3 $\pm$ 3 dBm
Input SSB Phase Noise	-120 dBc/Hz @ 10 Hz, -150 dBc/Hz @ 100 Hz, -160 dBc/Hz @ 1 kHz, -160 dBc/Hz @ $\geq$ 10 kHz

REMOTE MONITOR AND CONTROL:

Format / Protocol:	ITS Document OM1026
Interface	10/100 Base-T Ethernet

SUMMARY ALARM:

Interface	Type-C Contact Closure
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AC POWER SUPPLY INPUT:

Voltage	90 to 250 V _{AC}
Frequency	47 to 63 Hz
Power Consumption	50 W Maximum

CONNECTORS:

IF Input	Type N Female, 50 Ohm
RF Output	See Model Number Table
RF Output Monitor	SMA or 3.5mm Female
External Reference	SMA Female
Monitor & Control	Amphenol P/N: RJF2SA2G
Summary Alarm	ITT Cannon P/N: KPT07E8-3P
AC Power Input	ITT Cannon P/N: KPT07E12-3P

LED STATUS INDICATOR:

Powered and without Fault	GREEN
Powered and with Fault	RED

PERFORMANCE

TRANSFER CHARACTERISTICS:

Conversion Type	Single Conversion
Frequency Sense	No Inversion
Gain @ Min. Attenuation	+30 $\pm$ 2 dB
Gain Adjustment	30 dB range, 0.1 dB step size
Gain Stability at Constant Temperature	$\pm$ 0.25 dB Maximum / 24 hrs
Gain Stability over Temp.	$\pm$ 1.0 dB ptp Maximum
Gain Flatness	$\pm$ 0.25 dB ptp over 40 MHz, $\pm$ 1 dB ptp over entire band
NF @ Min. Attenuation	15 dB Maximum
Group Delay Variation	1.5 ns ptp over entire band
Image Rejection	80 dB Minimum
Output Mute	60 dB Minimum on command & unit fault
Spurious, Signal Related up to 0 dBm output	-65 dBc Maximum
Spurious, Signal Independent	-70 dBm Maximum
LO Leakage at RF Output	-70 dBm Maximum
Output SSB Phase Noise	-40 dBc/Hz @ 10 Hz, -70 dBc/Hz @ 100 Hz, -80 dBc/Hz @ 1 kHz, -90 dBc/Hz @ 10 kHz, -100 dBc/Hz @ 100 kHz, -115 dBc/Hz @ $\geq$ 1 MHz

(Optional lower phase noise models available)

INTERNAL REFERENCE CHARACTERISTICS:

Frequency Stability	$\pm 5 \times 10^{-8}$ over -40 to +60 ° C, $\pm 5 \times 10^{-10}$ / day
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MECHANICAL

Dimensions	12.75" x 7.93" x 3.3"
Weight	12 lbs Maximum
Air Leak Rate	< 10 cm ³ / Min. pressurized @ 3 PSI through waveguide port, selected models only
Finish	Electroless Nickel Plating per MIL-C-26074, Class 4

ENVIRONMENTAL

OPERATING:

Temperature	-40 to +60 ° C
Humidity	Up to 100% Condensing
Altitude	Up to 10,000 Feet AMSL

NON-OPERATING:

Temperature	-50 to +70 ° C
Altitude	Up to 55,000 Feet AMSL
Shock and Vibration	Normal handling by commercial carriers

ITS Proprietary information

Specifications are Subject to Change without Notice
Errors & Omissions Excepted

Response, Innovation, Craftsmanship

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