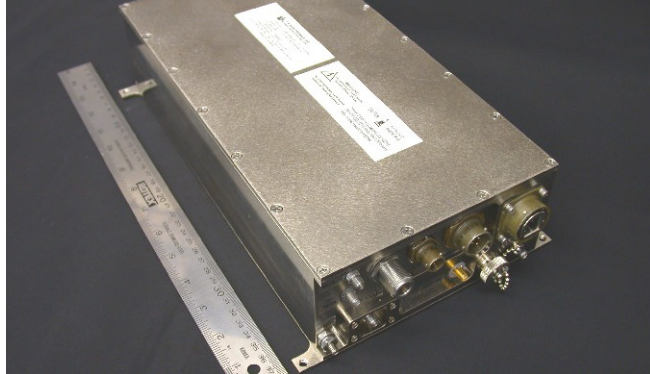




Block Downconverters for Satellite Earth Stations



These block downconverters provide a frequency translation of a C to Ka-band input to an L-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 (GHz)	Output Frequency (MHz)	Input Connector Type
DC-6A426A67-1810	6.425 to 6.675	950 to 1,200	SMA Female
DC-11A4512A20-1810	11.45 to 12.20	950 to 1,700	SMA Female
DC-11A5512A20-1810	11.55 to 12.20	950 to 1,600	SMA Female
DC-12A212A7-1810	12.20 to 12.70	950 to 1,450	SMA Female
DC-13A7514A50-1810	13.75 to 14.50	950 to 1,700	SMA Female
DC-17A317A8-1810	17.30 to 17.80	950 to 1,450	3.5 mm Female
DC-17A318A1-1810	17.30 to 18.10	950 to 1,750	3.5 mm Female
DC-18A219A2-1810	18.20 to 19.20	1,000 to 2,000	3.5 mm Female
DC-18A318A8-1810	18.30 to 18.80	950 to 1,450	3.5 mm Female
DC-19A220A2-1810	19.20 to 20.20	1,000 to 2,000	3.5 mm Female
DC-19A720A2-1810	19.70 to 20.20	950 to 1,450	3.5 mm Female
DC-24A7525A25-1810	24.75 to 25.25	950 to 1,450	WR-34 Grooved
DC-28A328A6-1810	28.35 to 28.60	950 to 1,200	WR-28 Grooved
DC-29A1529A85-1810	29.15 to 29.85	950 to 1,650	WR-28 Grooved
DC-29A230A0-1810	29.25 to 30.00	950 to 1,700	WR-28 Grooved

Other frequency bands available. Contact ITS for details.

ITS Proprietary information
Specifications are Subject to Change without Notice
Errors & Omissions Excepted



Block Downconverters for Satellite Earth Stations

INTERFACE

RF INPUT CHARACTERISTICS:

Frequency	See Model Number Table
Return Loss (WR-28)	20 dB Typical, 18 dB Minimum
Input Monitor Level	-20 ± 2 dB

IF OUTPUT CHARACTERISTICS:

Frequency	See Model Number Table
Return Loss (50 Ohm)	20 dB Typical, 18 dB Minimum
Output Power at 1dB GC	+18 dBm Minimum
3rd Order Intercept Point	+25 dBm Minimum

EXTERNAL REFERENCE INPUT:

Frequency	10 MHz
Power Level	-3 ± 3 dBm
Input SSB Phase Noise	-120 dBc/Hz @ 10 Hz, -150 dBc/Hz @ 100 Hz, -160 dBc/Hz @ 1 kHz, -160 dBc/Hz @ ≥ 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:

RF Input	See Model Number Table
RF Input Monitor	SMA or 3.5mm Female
IF Output	Type N Female, 50 Ohm
External Reference	SMA Female
Monitor & Control	Amphenol PN: RJF2SA2G
Summary Alarm	ITT Cannon PN: KPT07E8-3P
AC Power Input	ITT Cannon PN: 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
Constant Gain	+10 ± 2 dB
Gain Stability at Constant Temperature	±0.25 dB Maximum / 24 hrs
Gain Stability over Temp.	±1 dB ptp Maximum
Gain Flatness	±0.25 dB ptp over 40 MHz, ±1.5 dB ptp over entire band
Image Rejection	60 dB Minimum
Noise Figure	17 dB Maximum
Group Delay Variation	1.5 ns ptp over entire band
Spurious, Signal Related up to 0 dBm output	
LO + 2 × IF	-60 dBc Maximum
All Others	-65 dBc Maximum
Spurious, Signal Independent	-80 dBm Maximum
LO Leakage at RF Output	-80 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 @ ≥ 1 MHz

(Optional lower phase noise models available)

INTERNAL REFERENCE CHARACTERISTICS:

Frequency Stability	±5 × 10 ⁻⁸ over -40 to +60 ° C, ±5 × 10 ⁻¹⁰ / day
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MECHANICAL

Dimensions	12.75" × 7.93" × 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

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Response, Innovation, Craftsmanship

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