Ka-BAND BLOCK UP CONVERTER (BUC)

ACTX-Ka4/8W-Ex-V5

Low Power GaN Series

Ed.10

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ACTX-Ka series is designed for Ka-band satellite communication systems. These transmitters are integrated with power supply, phase locked oscillator, power amplifier and frequency converter. Temperature alarm and power supply shutdown at high temperature conditions are integrated to protect them from permanent damages. Each BUC is tested over specified temperature range, assuring very good gain stability and high reliability.

TRANSMITTER SPECIFICATIONS

Input frequency ..... 950 to 2000 MHz (See options)
Input L-band VSWR (50 Ω) ..... < 1.5:1
Output frequency ..... 27.5 to 31.0 GHz (See options)
Output Ka-band VSWR (50 Ω) ..... < 2.0:1
Spectrum inversion ..... None

Transmitter Characteristics @ 25°C	Psat (typ)	Plin (min)	Gain @ Plin	Consumption	Size (LxWxH)	Weight
ACTX-Ka4W-Ex-V5	36.0 dBm	33.0 dBm	65 dB min	35 W @ Plin	195 x 135 x 50 mm 7.7 x 5.3 x 2 inches	2.0 kg 4.4 lbs
ACTX-Ka8W-Ex-V5	39.0 dBm	36.0 dBm	65 dB min	45 W @ Plin		

Gain flatness over the whole bandwidth ..... ± 2.0 dB
Gain flatness over 40 MHz ..... ± 0.5 dB
Gain stability over 24 hours ..... ± 0.25 dB @ constant temperature
Gain variation over temperature ..... ± 1.5 dB over the whole range
Attenuation adjustment range ..... 30 dB with 0.25 dB steps
Mute ..... > 60 dB
Output noise power density ..... < -94 dBm/Hz (TX Band 27.5-31.0 GHz)
< -150 dBm/Hz (RX Band 17.7-21.2 GHz)
Spurious @ Plin ..... < -60 dBc
Spectral regrowth @ Plin ..... < -30 dBc (QPSK modulation at 1.0 x rate offset from carrier)
Third order intermodulation products @ Plin ..... < -25 dBc (Δf = 5 MHz relative to combined power of 2 carriers)

Output phase noise (IESS-308/309 – 5 dB)
100 Hz ..... -65 dBc/Hz
1 kHz ..... -75 dBc/Hz
10 kHz ..... -85 dBc/Hz
100 kHz ..... -95 dBc/Hz
External reference (multiplexed on L-band input) ..... 10 MHz / 0 dBm ± 5 dB
DC input voltage ..... 20-60 V_{DC}

Storage temperature ..... -40 to +85°C
Operating temperature ..... -20 to +60°C
Relative humidity ..... up to 100%
Operating altitude ..... up to 4500 m

Interfaces
TX input (L-Band + DC + External Reference) ..... Type N(F) 50 Ω
TX output (Ka-Band) ..... WR28 grooved (PBR 320)
M&C ..... MS3112E12-14S (mating connector provided)
Finish ..... RAL 9003 (White)

Ka-band output	L-band input	LO frequency	Standard frequency option
29.5 to 30.0 GHz	950 to 1450 MHz	28.550 GHz	ACTX-KaxW-E2-V5
30.0 to 31.0 GHz	950 to 1950 MHz	29.050 GHz	ACTX-KaxW-E6-V5
30.0 to 31.0 GHz	1000 to 2000 MHz	29.000 GHz	ACTX-KaxW-E66-V5

LP2: ..... Internal reference (Automatic external selection on presence)
LP3: ..... Operating temperature -40 to +60°C (Gain variation ± 2.0 dB)
LP4: ..... Ethernet interface (TCP/IP)
LP5: ..... SNMP Agent
LP6: ..... Dedicated power supply connector (MS3112E8-4S)

Any other frequency band or custom specification available under request. Please, contact factory. Specifications are subject to change without notice.

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