

Ka BAND BUC 40/80W GaN High Power Series

ACTX-Ka40/80W-Ex-Vx



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. Additionally, output power detection is available through M&C communication protocol

TRANSMITTER SPECIFICATIONS

| | |
|--------------------------|-------------------------------|
| Input Frequency | 950 to 2000 MHz (see options) |
| Input VSWR (50Ω) | < 1.5:1 |
| Output Frequency | 29 to 31 GHz (see options) |
| Output VSWR (50Ω) | < 1.3:1 |
| Spectrum Inversion | None |

| Characteristics @ 25°C | Psat (typ) | Plin (min) | Gain | Power Consumption | Size (LxWxH) | Weight |
|------------------------|------------|------------|----------|-------------------|----------------------------------|--------------------|
| ACTX-Ka40W-Ex-V4 | 46.0dBm | 43.0dBm | 65dB min | 300W (Plin) | 250x180x165mm 9.8x7.1x6.5 in | 8.0 Kg 17.6lbs |
| ACTX-Ka80W-Ex-V2 | 49.0dBm | 46.0dBm | 65dB min | 650 W (Plin) | 340x220x155mm 13.4x8.7x6.1 in | 11.0 kg 24.2lbs |

| | |
|--|--|
| Gain Flatness over the whole channel bandwidth | ±2 dB |
| Gain flatness over any 40MHz | ±0.5 dB |
| Gain Stability over 24 hours | ±0.25 dB |
| Gain Stability over temperature | ±1.5 dB over the whole range |
| Attenuation adjustment range | 30 dB (0.25dB steps) |
| Mute | >60 dB |
| Output Power Detection accuracy | ±1dB (range from Psat-20dB) |
| Spurious @ Plin | <-60 dBc |
| Spectral Regrowth @Plin | <-30 dBc |
| Third Order intermodulation products @ Plin | QPSK at 1.0 x rate offset from carrier <-25dBc (Δf=5MHz relative to combined Power of 2 carriers) |

Output Phase noise (IESS-308/309 – 5dB)

| | |
|--|-------------------|
| 100Hz | -65dBc/Hz |
| 1Kz | -75dBc/Hz |
| 10KHz | -85dBc/Hz |
| 100KHz | -95dBc/Hz |
| External reference (Mux on L-Band input) | 10MHz/ 0dBm ± 5dB |

ENVIRONMENT

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

PHYSICAL

| | |
|---|-----------------|
| AC Input Voltage (DC optionnal) | 85-265VAC |
| Interfaces | |
| TX input (L Band+Ext. Ref) | Type N(F) 50Ω |
| TX output (Ka-band) | WR28 grooved |
| M&C (Main interface RS232/RS485) | MS3112E12-14S |
| M&C (Ethernet/SNMP Interface optionnal) | MS3112E12-8S |
| Power Supply | MS112E12-3P |
| Finish | RAL9003 (white) |

OPTIONS

| | |
|-----------|--|
| HP1 | 48 VDC power supply |
| HP2 | Internal reference (Automatic external selection on presence) |
| HP3 | Op. Temp. -40 to +60°C (gain variation ±2 dB) |
| HP4 | Ethernet Interface (TCP/IP) |
| HP5 | SNMP Agent |

| Ka-band output | L-band input | LO frequency | Standard frequency option |
|------------------|------------------|--------------|---------------------------|
| 29.5 to 30.0 GHz | 950 to 1450 MHz | 28.55 GHz | ACTX-KaxW-E2-Vx |
| 30.0 to 31.0 GHz | 950 to 1450 MHz | 29.05 GHz | ACTX-KaxW-E6-Vx |
| 30.0 to 31.0 GHz | 1000 to 2000 MHz | 29.00 GHz | ACTX-KaxW-E66-Vx |

Based on ACORDE DATASHEET actx-ka_hp Ed.13 from 05/10/16

