



SINGLE / DUAL Ka-BAND BUC 20W

ACTX-Ka20W-Ex-V4

Medium Power Compact GaN Series



The ACTX-Ka family of BUCs is designed for the most challenging Ka-band professional & military satellite communication systems (ground, SOTP, SOTM, maritime, etc.). Latest technology is applied to obtain the best power efficiency, phase noise, gain stability and linear power according to MIL-STD-188-164C. The ACTX-Ka family is a high reliability solution designed for harsh environmental conditions, with every single production unit fully tested in an environmental chamber and delivered with a complete factory acceptance test report.

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) | < 1.3:1 |
| Spectrum inversion | None |
| Max. input level without damage | +10 dBm |
| Psat (typ) | 43.0 dBm |
| Plin (min) | 40.0 dBm |
| Gain @ Plin | 65 dB min |
| Gain flatness | ±2.0 dB over whole BW ±0.5 dB over 40 MHz |
| Gain stability (24 hours) | ±0.25 dB @ const. temp. |
| Gain variation over temperature | ±1.5 dB (±2.0 dB option MP3) |
| Attenuation adjustment range | 30 dB with 0.25 dB steps |
| Mute | > 60 dB |
| Output noise power density | < -85 dBm/Hz (27.5-31.0 GHz) < -150 dBm/Hz (17.7-21.2 GHz) |
| Power detection accuracy | ±1.0 dB (Psat to Psat -20 dB) |
| Spurious @ Plin | < -60 dBc |
| SR @ Plin | < -30 dBc (MIL-STD-188-164C) |
| TOI @ Plin | < -25 dBc (MIL-STD-188-164C) |

LOCAL OSCILLATOR

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 | 10 MHz |
| External reference level | 0 dBm ± 5 dB |

POWER SUPPLY

| | |
|------------------|--------------|
| DC input voltage | 48 Vdc |
| Consumption | 150 W @ Plin |

MECHANICAL SPECIFICATIONS

| | |
|--------------|--|
| Size (LxWxH) | 200 x 130 x 100 mm 7.9 x 5.1 x 3.9 in |
| Weight | 3.5 kg 7.7 lbs |
| Finish | RAL 9003 (White) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|------------------|
| Storage temperature | -40 °C to +85 °C |
| Operating temperature | -20 °C to +60 °C |
| Relative humidity | up to 100% |
| Operating altitude | up to 3000 m |

INTERFACES

| | |
|-------------------------------|------------------------|
| TX input (L-Band + Ext. Ref.) | Type N(F) 50 Ω |
| TX output (Ka-Band) | WR28 grooved (PBR 320) |
| M&C | D38999/20FC35SN |
| Power supply | D38999/20FB98PN |

All mating connectors provided

OPTIONS

| Ka-band output | | L-band input | |
|------------------|--|-----------------------|--|
| 29.5 to 30.0 GHz | | 950 to 1450 MHz | |
| 30.0 to 31.0 GHz | | 1000 to 2000 MHz | |
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| 30.0 to 31.0 GHz | | | |
| LO freq. | | Standard freq. option | |
| 28.550 GHz | | ACTX-Ka20W-E2-V4 | |
| 29.000 GHz | | ACTX-Ka20W-E66-V4 | |
| 28.000 GHz | | ACTX-Ka20W-E31-V4 | |
| 29.000 GHz | | | |

| | |
|-----|--|
| MP1 | 85-265 VAc (47-63 Hz) 200 x 130 x 110 mm |
| MP2 | Internal reference (Auto external on presence) |
| MP3 | Operating temperature -40 °C to +60 °C |
| MP4 | Ethernet interface (TCP/IP) |
| MP5 | SNMP Agent |

