

This compact yet powerful 25W outdoor BUC harnesses advanced technology, delivering exceptional broadband RF performance, high efficiency, and outstanding linearity and reliability for applications such as broadcast contribution and CBH

Key Features

- Built-in 1:1 Redundancy, no External Redundancy Controller required
- High Linearity, efficiency and MTBF
- Built-in High Precision true RMS Output Power Meter
- Built-in 110/220 VAC power supply
- Web Interface, SNMP support
- Output Overdrive Protection
- Output VSWR Protection
- Thermal shutdown

Options

- Standard (CS, 5.850-6.425 GHz), Extended (CX, 5.850-6.725 GHz) and Insat (CI, 6.725-7.025 GHz) bands
- Internal High-stability 10 MHz Reference
- 1U Rack mountable RCP (Remote Control Panel) for 1:1 redundancy
- 48 VDC power feed



In addition to its exceptional performance and reliability, this device boasts a comprehensive suite of monitoring and control capabilities, easily accessible via Ethernet, serial RS232, RS485 interfaces, or dry contacts. It is the premier choice for demanding mobile and fixed applications, specifically designed for outdoor installations, and offers the advanced capability to utilize high MODCOD (up to 256 APSK) for broadcast contribution, as well as for Cellular Backhaul (CBH) and high-capacity data transmission for VSAT and SCPC User Terminals

With an IP67 ingress protection rating, the device can be mounted outdoor under the direct sun rays on an antenna post/kingpost, on the platform behind the antenna, or inside the antenna hub, effectively eliminating the W/G RF loss commonly associated with indoor units. Additionally, it does not require air-conditioning, resulting in significant reductions in ongoing electrical costs and maintenance expenses, while eliminating the need for nearby shelter construction

| MODELS | | | |
|--|--|-----------------|-----------------|
| RF CHARACTERISTICS | SBB0025CS | SBB0025CX | SBB0025CI |
| RF Frequency range | 5.850-6.425 GHz | 5.850-6.725 GHz | 6.725-7.025 GHz |
| IF Frequency range | 950-1525 MHz | 950-1825 MHz | 975-1275 MHz |
| LO Frequency | 4.9 GHz | 4.9 GHz | 5.750 GHz |
| RF CHARACTERISTICS | | | |
| P _{rated} , Rated Output Power | 44 dBm / 25 W min | | |
| P _{Lin1C} , Linear Power as defined by MIL-STD-188-164C, 1 carrier | 42 dBm / 16 W min | | |
| P _{Lin2C} , Linear Power as defined by MIL-STD-188-164C, 2 carriers | 41 dBm / 12.6W min | | |
| Small Signal Gain | 70 dB typ | | |
| Gain Flatness over full frequency range | ± 1.5 dB max | | |
| Gain Flatness over any 40 MHz | ± 0.4 dB max | | |
| Gain Control | 20 dB min dynamic range, 0.1 dB steps | | |
| Gain Stability over full Temperature and Frequency ranges | ± 1.5 dB max | | |
| Gain stability over 24h at constant drive and temperature | ±0.5 dB | | |
| Linearity: IMD3, measured with 2 equal tones 5 MHz apart | -25 dBc at total power @ P _{Lin2C} | | |
| External Reference Frequency | 10 MHz, sinusoidal, multiplexed with L-band (IF In) | | |
| External Reference Level | 0 dBm, ±5 dB | | |
| External Reference SSB Phase Noise, max | -110 dBc/Hz @ 10 Hz; -125 dBc/Hz @ 100 Hz; -140 dBc/Hz @ 1 kHz; -155 dBc/Hz @ 10 kHz; -165 dBc/Hz @ 100 kHz; -165 dBc/Hz @ 1 MHz; -54 dBc/Hz @ 10 Hz; -72 dBc/Hz @ 100 Hz; -80 dBc/Hz @ 1 kHz; -90 dBc/Hz @ 10 kHz; -100 dBc/Hz @ 100 kHz; -115 dBc/Hz @ 1 MHz | | |
| Up-Converter SSB Phase Noise, max (not present if SSPA) | -80 dBc/Hz @ 1 kHz; -90 dBc/Hz @ 10 kHz; -100 dBc/Hz @ 100 kHz; -115 dBc/Hz @ 1 MHz | | |
| Integrated Phase Noise | 1° RMS max | | |
| Output Spurious: In-band | < -13 dBm | | |
| Out-of-band | Complies with ETSI EN 301 428/430 and MIL-STD188-164C | | |
| Harmonics at P _{Lin2C} | < -60 dBc | | |
| AM/PM Conversion | 2.0 °/dB max at P _{Lin1C} | | |
| Noise Power Density | Tx < - 80 dBm/Hz Rx < - 145 dBm/Hz | | |
| Output RF Power Monitor | -40 dB, 1dB peak-to-peak flatness over frequency range, calibration chart provided | | |

| INTERFACES | |
|--|--------------------------------------|
| IF Input connector | 50 Ohms N-type (F) |
| Input VSWR | 1.5:1 max |
| RF Output Connector | CPR137 grooved |
| Output VSWR | 1.3:1 max |
| RF Sample | 50 Ohms N-type (F) |
| AC Power In/DC Power In* | MS3102R14S-7P/MS3102R14S-9P |
| M&C Interfaces: Ethernet, Serial RS-232 & RS-485 | MS3112E14-19P |
| Redundancy | MS3112E14-19S |
| M&C | RS-232, RS-485, Ethernet (Web, SNMP) |

| POWER | |
|---|-------------|
| AC Voltage Range | 90-265 VAC |
| Frequency Range | 47-63 Hz |
| DC Voltage Range* | 36 – 72 VDC |
| Power Consumption at P _{Sat} | 175 W |
| Power Consumption at P _{Lin2C} | 150 W |

| ENVIRONMENTAL | |
|------------------------------|---|
| Cooling systems | Forced Air |
| Temperature | -40 °C to +55 °C |
| Operating Storage | -55 °C to +85 °C |
| Relative Humidity | 100%, up to 4" of rain precipitation/hour |
| Altitude | 10,000 ft (3,000 m) AMSL |
| Adiabatic Derating (Altitude | 5° C/1000 m |
| Temperature Derating Factor) | |
| Environmental | IP67 Rating |

| MECHANICAL | |
|--------------------|--------------------------------------|
| Dimensions (LxWxH) | 9" x 5" x 6.5" 229 x 127 x 165 mm |
| Weight | 10 lb (4.5 kg) |

* When DC power option is ordered, AC power is not available