

RFM3202

3U OpenVPX versatile and scalable wideband microwave transceiver

High spectral density wideband microwave dual transceiver

- Rugged, compact, SOSA aligned and open-systems compliant
- 2 GHz instantaneous bandwidth
- Tunable RF bandwidth: 0.3 GHz to 18 GHz
- Full frequency coverage available with the DCM3220



The RFM3202 high spectral density 3U OpenVPX™ and SOSA aligned microwave transceiver supports high-bandwidth applications up to 18 GHz. Maximizing spectral density, this compact module provides two independently tuned coherent up-conversion and two down-conversion channels for EW, direction finding, SIGINT and signal measurement applications. The RF transceiver offers 2 GHz (per channel) of instantaneous bandwidth (IBW), 2 GHz–18 GHz tunable RF range and an RF conversion bypass for the first Nyquist direct digitization downstream.

FEATURES

- Single slot, 3U form factor
- OpenVPX interface compliant
- Two individual up- and down-conversion channels
- Ruggedized for diverse environments
- 1GbE control interface
- Integrated LO generation lockable to external reference
- External LO inputs for EW/EA versatility

Optional features

- Built-In-Test: RF/IF output power, voltages, currents, temperature, model/SN, tune state
- High-Speed Strong Signal Indicator: Variable trip thresholds, High dynamic range
- Integrated High-Isolation Blanking

KEY SPECIFICATIONS

- RF Frequency Range: 2 GHz to 18 GHz
- Direct Digitization: 0.3 GHz to 2 GHz
- IF Frequency:
 - Converted: 3.4 GHz to 5.4 GHz
 - Direct Digitization: 0.3 GHz to 2 GHz
- Gain: 25 dB
- oP1dB: +20 dBm typ. at max gain
- oIP3: +30 dBm typ. at max gain
- Dynamic range: 63 dB typ. (2 GHz IBW)

Noise Figure

- Upconverter: 20 dB typ. at max gain
- Downconverter: 15 dB typ. at max gain

SPECIFICATIONS

Format/Size: 3U OpenVPX, single slot, 1" pitch, conduction cooled
 Control Interface: 1GbE
 Weight: 1.75 lb typ. ±0.25 lb
 Operating Temperature Range: -40° C to +71° C rail
 IBW: 2 GHz typ., 1.6 GHz min. 2 GHz–3.8 GHz
 IF Bandwidth: 2 GHz typ., 1.6 GHz min. RF In/Out: 2 GHz–3.8 GHz
 Gain Control Range: 31 dB, 0.5 dB LSB (2 GHz–18 GHz), 1dB LSB (0.3 GHz–2 GHz)
 Tuning Speed: 100 μS typ., 250 μS Max, (Internal LOs)
 Tuning Resolution: 10 MHz
 VSWR: <2:1 typ.
 Gain Flatness: ±2 dB typ. (2 GHz IBW)
 Minimum Detectable Signal: -63 dBm typ. (2 GHz BW, 3 dB SNR)
 No Damage Input Level: +25 dBm max.
 Reference Input: 10 MHz or 100 MHz, +3 dBm ±3dB, sine
 DC Supply: +12 V ±5% @ 9.1A typ. , +3.3 V ±2.5% @ 0.8 A typ.
 DC Power: 117 W typ., 125 W max.

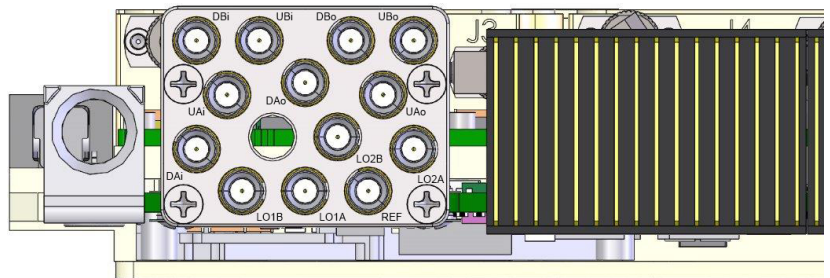


UPCONVERTER SPURIOUS PERFORMANCE

Conditions: Max gain, -15 dBm IF input
 In IBW, Internal LO: -45 dBc typ. (-35 dBc max.)
 In IBW, External LO: -70 dBc typ. (-65 dBc max.)
 Out IBW: -35 dBc typ. (-30 dBc max.)
 LO Leakage: -70 dBm typ. (-60 dBm max.)

DOWNCONVERTER SPURIOUS PERFORMANCE

Conditions: Max gain, -15 dBm IF input
 In IBW, Internal LO: -45 dBc typ. (-35 dBc max.)
 In IBW, External LO: -70 dBc typ. (-65 dBc max.)
 Out IBW: -50 dBc typ. (-45 dBc max.)
 LO Leakage: -70 dBm typ. (-60 dBm max.)



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