

Converters

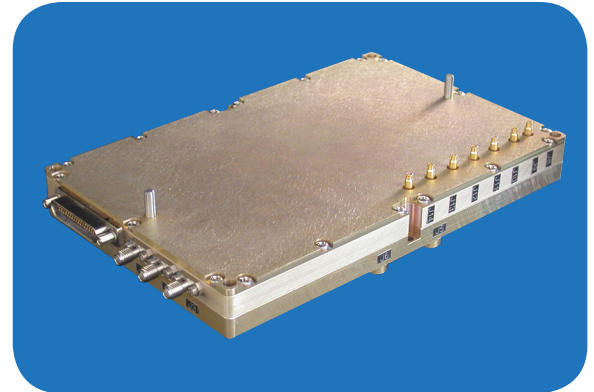
Ka-Band Tactical Converter

Model: MFC142



Features

- Quad Channel Multi-Function Ka-Band Converter
- Independent TX/RX Control Each Channel
- Compact Non-Hermetic Package
- Low residual Phase Noise Tx Exciter Design
- Supports Radar & Comm Waveforms
 - Pulse and CW Tx Mode each channel
 - Direct I/Q Tx input
 - 90MHz IF Rx output
- 60dB Rx Attenuation Control
- 60dB Tx Attenuation Control
- Multiple RX Modes
 - High intercept point mode
 - High dynamic range mode
 - Multipurpose mode
- Tx/Rx switching in less than 200ns
- Enters and exits low power “standby” mode in less than 150us



| Key Parameter | Requirement |
|---------------------------|--------------------------|
| Output Power | |
| Ka Band | $\geq +20$ dBm |
| ADC_CLK | +5 dBm +/- 1.5 dB |
| Output Return Loss | |
| Ka Band | ≥ 10 dB |
| FREQ_REF, LO1, LO2 | ≥ 12 dB |
| TX SSB Phase Noise | |
| (TX RF - Ka Band) | Freq. Offset (Hz) dBc/Hz |
| | 400 -82 |
| | 1000 -91 |
| | 2000 -100 |
| | 10000 -110 |
| | 100000 -114 |
| | 500000 -120 |
| | 1.00E+06 -124 |
| RX SSB Phase Noise | |
| (RX IF - 90 MHz) | Freq. Offset (Hz) dBc/Hz |
| | 400 -82 |
| | 1000 -91 |
| | 2000 -100 |
| | 10000 -110 |
| | 100000 -114 |
| | 500000 -120 |
| | 1.00E+06 -124 |

| Key Parameter | Requirement |
|--|------------------|
| T/R Switching | |
| T/R to Pulse Gate | ≤ 90 nsec |
| Pulse Gate to Tx Pulse | 12 nsec |
| T/R to RX Env | ≤ 70 nsec |
| TX Spurious | |
| Within +/-800 Hz of carrier | ≤ -60 dBc |
| +/-800 Hz to +/-35 MHz offset | ≤ -80 dBc |
| Greater than +/-35 MHz offset | ≤ -60 dBc |
| RX Spurious | |
| Within +/-800 Hz of carrier | ≤ -62 dBc |
| Greater than +/-800 Hz offset | ≤ -74 dBc |
| CID, COMM any offset | ≤ -62 dBc |
| RX NF | |
| HIGH GAIN | 8 dB |
| NORM | 25 dB |
| IIP3 | |
| HIGH GAIN | -11 dBm |
| NORM | +22 dBm |
| Gain | |
| HIGH GAIN | 42.5 dB +/- 2 dB |
| NORM | 18.5 dB +/- 2 dB |
| Active DC Power Dissipation - TX (CW x 4) | |
| Total | 51.8 W |
| Active DC Power Dissipation - RX (CW x 4) | |
| Total | 60.1 W |

Specifications subject to change without notice.

TRAK Microwave Corporation

E-mail: sales@trak.com • www.trak.com

Ph: 813-901-7200 • Fax: 813-901-7491

4726 Eisenhower Boulevard • Tampa, FL 33634-6391 USA

© TRAK Microwave Corp.