

# THE WAVECOM TR2126SE

MMDS/MDS TRANSCEIVER

The WaveCom **TR2126SE** is an MMDS/MDS Transceiver for use in wireless systems. The TR2126SE integrates an LNA, downconverter, upconverter, power amplifier, RF and IF diplexers to provide a one-box solution for two-way Wireless RF communications. The TR2126SE and antenna are situated outdoors and connected to a cable modem indoors by



standard RG-59 cable.

A single RF connector on the weatherproofed enclosure provides the interface to the transmit/receive antenna for rapid setup. The Transceiver is configured to work with standard cable modem frequency plans and levels, permitting direct connection. The Transceiver also includes an RF mute function to reduce power consumption and broadband noise emissions.

## Features:

- +27 dBm output for high reverse channel system gain
- Microprocessor controlled gain compensation over temperature
- Low Phase Noise
- Automatic transmit RF mute (transmits only when an IF signal is present)
- Fully weatherized unit suitable for outdoor mounting
- Straightforward installation using optional built-in signal strength indicator



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# SPECIFICATIONS — WAVECom TR2126SE

## MMDS/MDS Transceiver

### UPCONVERTER SPECIFICATIONS

|                              |                                              |
|------------------------------|----------------------------------------------|
| IF Input Frequency           | 14.375 to 26.375 MHz                         |
| RF Output Frequency          | 2150 to 2162 MHz                             |
| Output 1dB Compression Point | +27 dBm                                      |
| Gain                         | 20 ± 2 dB across full temperature range      |
| Gain Flatness                | ± 1 dB                                       |
| In-band Spurious             | -60 dBc                                      |
| Out-of-band Spurious         | -60 dBc                                      |
| Phase Noise                  | -93 dBc/Hz @ 10 kHz<br>-115 dBc/Hz @ 100 kHz |
| IF Level for RF Activation   | +3 dBmV                                      |

### DOWNCONVERTER SPECIFICATIONS

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| RF Input Frequency               | 2500 to 2686 MHz                             |
| IF Output Frequency              | 222 to 408 MHz                               |
| Nominal Gain                     | 32 ± 2 dB                                    |
| Gain Flatness                    | ± 1.5 dB full band; ± 0.3 dB/ 6 MHz          |
| Noise Figure                     | ≤5.0 dB @ 20C, typically 4.0 dB              |
| Output 3rd Order Intercept       | +22 dBm at nominal gain                      |
| WCS Rejection                    | 70 dB                                        |
| Combined Image and PCS Rejection | 85 dB                                        |
| Spurious                         | -65 dBm max.                                 |
| Phase Noise                      | -93 dBc/Hz @ 10 kHz<br>-115 dBc/Hz @ 100 kHz |

### GENERAL

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Frequency Setting & Stability | ± 7.5 kHz (-40 to +60°C)                   |
| Frequency Stability Over Time | < ± 10 kHz over 10 years                   |
| RF Connector                  | N female, 50 ohms                          |
| IF Connector                  | F female, 75 ohms                          |
| Input/Output VSWR             | 2:1                                        |
| DC Supply                     | 12 to 24 V, 12 Watts max.                  |
| Operating Temperature         | -40 to +60°C (-40 to +140°F)               |
| Size                          | 6" x 8" x 0.9" (15.24 x 20.32 x 2.29 cm)   |
| Mounting                      | Pole (1" to 1.75" (25mm to 44mm) diameter) |



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