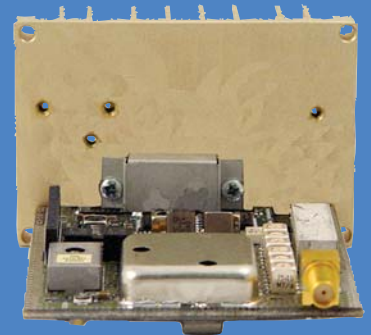


DM-3413

HIGH SPEC TRANSCEIVER OEM DATA UHF MODULE

380-512 MHz



The **DM-3413** OEM Transceiver is designed to provide a high spec wireless connection when integrated into your product and can serve international as well as domestic applications.

The **synthesized DM-3413** is built to comply with the FCC's spectrum refarming, Industry Canada (IC) and the stringent European ETSI standards.

The **UHF DM-3413** is available in 25, 12.5, and 6.25 kHz channel steps. Contact your sales representative for European channel step versions.

Dataradio RF modules are designed specifically for data transmission. The DM-3413 provides superior specifications that result in low group delay. With a fast attack RX/TX synthesizer, 1-5 watts of adjustable RF output power, minimal keyup/down sideband noise, and enhanced frequency stability, the DM-3413 provides the best environment for the transmission of complex data modulations.

With a rugged, compact design, our DM-3413 gives OEM users a space-saving solution for their wireless data applications. The DM-3413 is manufactured in the USA, backed by our two-year warranty and supported by our superior Technical Service.

DM-3413 SPECIFICATIONS

GENERAL

Frequency Range	380-512 MHz (over 9 bands)*
Frequency Control	Synthesized
Frequency Resolution	5, 6.25, and 10 kHz
Frequency Stability	1.0 ppm, -30° to 60° C
Mode of Operation	Simplex or half-duplex
Operating Voltage	10-16 VDC (13.3 VDC nominal)
Operating Temperature	-30° to 60°C
RF Input/Output	SMA jack (female)
Data Interface	14-pin in-line socket
Dimensions	4.584" L x 3.25"W x 2.212" H (116.5 mm L x 82.6 mm W x 56.2 mm H)
Weight	7.06 oz. (200.0 g)

FREQUENCY BANDS*

Band 0	406-422 MHz or 414-430 MHz	Band 5	450-470 MHz
Band 1	380-403 MHz	Band 6	464-480 MHz
Band 2	403-419 MHz	Band 7	480-496 MHz
Band 3	419-435 MHz	Band 8	496-512 MHz
Band 4	435-451 MHz		

DM-3413 SPECIFICATIONS RECEIVER

RF Input Impedance	50 ohms
Adjacent Channel Selectivity	≥ 60 dB (12.5 kHz channel), ≥ 70 dB (25 kHz channel)
Intermodulation Rejection	≥ 70 dB per TIA/EIA
Spurious and Image Rejection	≥ 70 dB
FM Hum and Noise psophometrically weighted	≤ -40 dB @ 12.5 kHz, ≤ -45 dB @ 25 kHz
Sensitivity psophometrically weighted	≤ -116 dBm @ 12 dB SINAD, 1 kHz tone
Conducted Spurious	≤ -57 dBm
Modulation Distortion psophometrically weighted	$\leq 3\%$
Modulation Output	1kHz tone at standard deviation: $150 \text{ mV} \pm 50 \text{ mVrms}$
Modulation Bias	2.5 VDC $\pm 20\%$
Modulation Frequency Response	Referenced to 1.0 kHz: 12.5 kHz Ch: $+1/-3$ dB DC to 2.5 kHz 25.0 kHz Ch: $+1/-3$ dB DC to 5.0 kHz
Minimum Load Impedance	$\leq 10 \text{ k } \Omega$
RSSI Range	1.3V to 5.5V output from -120 to -60 dBm

TRANSMITTER

RF Output Power at 13.6 volts	Adjustable 1 - 5 watts
RF Output Impedance	50 Ω
Duty Cycle	50% transmit (30 sec max transmit)
Spurious and Harmonic Emission	-36 dBm
IM Attenuation	≥ 40 dB
FM Hum and Noise psophometrically weighted	≤ 40 dB (12.5 kHz), ≤ -45 dB (25 kHz)
Transmit Current	≤ 2.5 A (2.0 A nominal) @ 5.0 Watts, 13.3 VDC
Modulation Distortion	$\leq 3\%$ standard deviation, 1 kHz tones
Modulation Input Impedance	$\geq 40 \text{ k } \Omega$
Modulation Flatness	± 2 dB DC to 5 kHz ref. to 1 kHz (programmable to 0.5 dB using the onboard DAC)

MECHANICAL LAYOUT

