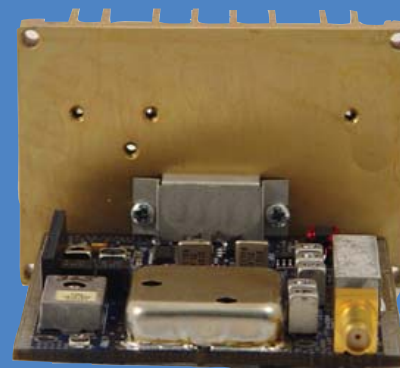


DM-3423

HIGH SPEC TRANSCEIVER OEM DATA VHF MODULE

132-174 MHz



The **DM-3423** 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-3423** is built to comply with the FCC's spectrum reforming, Industry Canada (IC) and the stringent European ETSI standards.

The **VHF DM-3423** is available in 25 or 12.5 kHz channel steps.

Dataradio RF modules are designed specifically for data transmission. The DM-3423 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-3423 provides the best environment for the transmission of complex data modulations.

With a rugged design, our DM-3423 gives OEM users a durable solution for their wireless data applications. The DM-3423 is manufactured in the USA, backed by our two-year warranty and supported by our superior Technical Service.

DM-3423 SPECIFICATIONS

GENERAL

Frequency Range	132-74 MHz (over 3 bands)
Frequency Control	Synthesized
Frequency Resolution	2.5 kHz (Band 6 & 7), 5 and 7.5 kHz (Band 4)
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)
Power and Data Interface	14-pin in-line socket
Dimensions	4.585" (116.5 mm) L x 3.25" (82.6 mm) W x 2.212" (56.2mm) H
Weight	7.06 oz (200.0 g)

FREQUENCY BANDS

Band 4	132-150 MHz	Band 6	150-174 MHz	Band 7	138-163 MHz
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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 <small>(psophometrically weighted)</small>	≤ -40 dB @ 12.5 kHz, ≤ -45 dB @ 25 kHz
Sensitivity <small>(psophometrically weighted)</small>	≤ -116 dBm @ 12 dB SINAD, 1 kHz tone
Conducted Spurious	≤ -57 dBm
Modulation Distortion <small>(psophometrically weighted)</small>	$\leq -3\%$
Modulation Output	1 kHz tone at standard deviation: $150 \text{ mV} \pm 50 \text{ mVrms}$
Modulation Frequency Response	Referenced to 1.0 kHz: 12.5 kHz Channel: $+1/-3$ dB DC to 2.5 kHz 25 kHz Channel: $+1/-3$ dB DC to 5.0 kHz
Minimum Load Impedance	≤ 10 k ohms
RSSI Range	0.75V to 2.0V DC output from -120 to -60 dBm

TRANSMITTER

RF Output Power at 13.6 volts	Adjustable 1-5 watts
RF Output Impedance	50 ohms
Duty Cycle	50% transmit (30 sec max transmit)
Spurious and Harmonic Emission	≤ -36 dBm
IM Attenuation	≥ -40 dB
FM Hum and Noise <small>(psophometrically weighted)</small>	≤ -40 dB @ 12.5 kHz, ≤ -45 dB @ 25 kHz
Transmit Current	≤ 2.0 A (1.5 A nominal) @ 13.3 VDC
Modulation Distortion <small>(psophometrically weighted)</small>	$\leq 3\%$ @ 60% maximum system deviation, 1 kHz tone
Modulation Input Impedance	≥ 40 k ohms
Modulation Input Bias	DC coupled 2.5 VDC $\pm 1\%$ temperature compensated to ± 100 mV. Supplied in transmit and receive.
Minimum Flatness	± 3 dB DC to 5 kHz ref. to 1 kHz (Programmable to ± 1.0 dB using onboard DAC)

MECHANICAL LAYOUT

