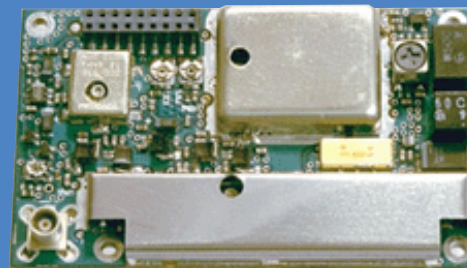


# SYNTHESIZED DM-3473

## UHF TRANSCEIVER OEM DATA MODULE

403 - 480 MHz



Continuing the tradition of offering unique radio modules designed specifically for data transmission, the DM-3473 sets a new standard.

**New size** Imitating the footprint made popular by PC card devices, the DM-3473 is smaller than its predecessors. The actual dimensions of 2.83" x 1.75" x 0.45" make this the smallest narrowband device on the market.

**Designed for today's data** The synthesized DM-3473 combines innovative technological features and tough electrical specifications designed to comply with FCC, Industry Canada (IC), and various international standards, including ETSI 300.220.

The DM-3473 features a fast attack synthesizer with lock times less than 7 ms, reduced key up/key down sideband noise, and low group delay receiver.

**UHF Frequency coverage** Refarming regulations require today's equipment meet new efficiency standards. The DM-3473 addresses the new frequency assignments by offering channel steps of 6.25 kHz.

**Rugged design** The DM-3473 is manufactured in the USA and supported by a two-year warranty.

### DM-3473 TECHNICAL SPECIFICATIONS

#### GENERAL

Channel Bandwidth	12.5 kHz, 25 kHz
Frequency Range	403-434 MHz, 450-480 MHz
Mode of Operation	Synthesized
Supply Voltage	6-9 VDC regulated
RF Input/Output	MCX female
Power and Data Interface	18-position dual row socket, 2mm (.0787 mil) pitch
Operating Temperature	-30° to +60°C
Maximum Dimensions (LxWxH)	2.83" x 1.75" x 0.45" (7.19 cm x 4.45 cm x 1.14 cm)
Weight	1.3 ounces (36 grams)

## DM-3473 TECHNICAL SPECIFICATIONS

TRANSMITTER	2W	500 mW	100 mW
Bandwidth without tuning <sup>1</sup>	30 MHz		
Frequency Stability (over temperature)	± 1.5 ppm		
Modulation Distortion	<3%		
Tx Lock Time <sup>2</sup>	≤7ms		
Data Input Impedance	>100 k ohm		
Modulation Response	400 mV for 3 kHz deviation 200 mV for 1.5 kHz deviation		
RF Power Out @ 7.2 VDC	2 W	500 mW	100 mW
Duty Cycle (max duration @ 7.2 VDC)	50%, 30 sec	50%, 30 sec	50%, 60 sec
Spurious and Harmonic FM	<-20 dBm	≤-37 dBm	≤ -37 dBm
Tx Current Drain @ rated RF Power	≤1500 mA	≤750 mA	≤ 215 mA

## RECEIVER

Bandwidth without tuning <sup>1</sup>	30 MHz
Frequency Stability (over temperature)	+1.5 ppm
12 dB SINAD Sensitivity <sup>3</sup>	<-116
RF Input Impedance	50 ohms
Selectivity	50 dB @12.5 kHz 60 dB @ 25 kHz
Spurious and Image Rejection	60 dB
Intermodulation Rejection	60 dB
Rx Current Drain	<60 mA
Rx Lock Time <sup>2</sup>	≤ 7 ms
Rx Data / Audio Distortion	<3%
Audio Output Level	150 mV rms
Audio Response (ref. 1 kHz)	+1/-3 dB @ DC 3.0 kHz (12.5 kHz) +1/-3 dB @ DC 5.0 kHz (25 kHz)
Minimum Load Impedance	10 k ohm
RSSI Range	70 dB

Note 1: 403-434 MHz or 450-480 MHz

Note 2: Dependent on synthesizer loading implementation

Note 3: Measured using a wideband data port on radio with psophometric filtering.

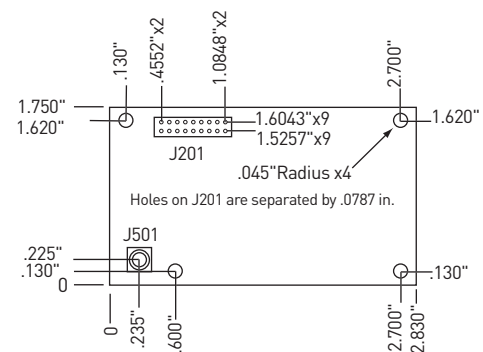
## INTERFACE INFORMATION

Data Connector: 18 pin SMD

Pin Pin Description

- 1 Ground
- 2 Ground
- 3 Power input
- 4 Power input
- 5 Power input
- 6 Transmit Enable (TTL) Active High
- 7 Receive Enable (TTL) Active High
- 8 Sleep Mode (TTL) Active High
- 9 Transmit Modulation Adjust
- 10 Transmit Modulation Input (+2.5 VDC constant bias)
- 11 Lock Detect
- 12 Receive Data Output
- 13 RSSI
- 14 Synthesizer Enable
- 15 Synthesizer Data
- 16 Synthesizer Clock
- 17 No Connect
- 18 No Connect

## MECHANICAL LAYOUT



Maximum height is .450 inches.

