

UHF Narrow Band Multi Channel Transceiver

LMD-401 458 - 462.5 MHz

LMD-401 458-462.5MHz is a synthesized multi channel transceiver module designed to meet FCC Part 90 and ISSED RSS-119 for US market and Canada. This small, highly integrated and fully shielded module is designed for embedding in user equipment. The module is suitable for various low power industrial telecontrol and telemetry applications.

Features

- FCC Part 90 and ISSED RSS-119 compliant
- 458 - 462.5 MHz band
- Programmable RF channel with 12.5 kHz channel space
- 10 mW, GFSK, 4800 bps
- Low power operation 3 - 5.5 V, 46 mA / TX, 36 mA / RX
- Small size 50 x 30 x 9 mm
- Excellent vibration & shock resistance / Mechanical durability
- Wide operation range 20 to +65 degree C



Applications

- Industrial remote control
- Remote monitoring / SCADA / Security
- Telemetry
- Data acquisition



General

Parameter	Specification (All ratings at 25 degree C unless otherwise noted)
Applicable standard	FCC Part 90.217, ISSED RSS-119
Communication form	Half-duplex
Emission class	F1D
Modulation	GFSK
Frequency	458 to 462.5 MHz
Channel spacing	12.5 kHz / Channel programmable
Frequency stability	+/- 2.5 ppm (-20 to +60 degree C)
Aging rate	+/-1 ppm / year
Data rate	4800 bps max. (Pulse width min.200 us, max. 15 ms)
Operating temp. range	-20 to +65 C (Storage -30 to + 75 C)
TX/RX switching time	15 ms typ. (DI vs DO)
Supply voltage	3.0 to 5.5 V
Supply current	46 mA (TX), 36 mA (RX)
Dimension	50 X 30 X 9 mm
Weight	25 g

Transmitter part

Parameter	Specification
RF output power	10 mW at 50 ohm (25 degree C)
Deviation	2.4 kHz (PN9, 4800 bps)
DI input level	L = GND, H = 3 V to Vcc

Receiver part

Parameter	Specification
Receiver type	Double superheterodyne
IF	21.7 MHz (1st), 450 kHz (2nd)
Maximum input level	10 dBm
Receiver sensitivity	-116 dBm typ.(12dB SINAD) -116 dBm typ.(BER 1%)
Co-channel rejection	- 7 dB (D/U ratio)
Spurious response rejection	- 44 dBm (1st mix, 2nd mix, 2 signal method)
Adjacent CH selectivity	- 50 dBm (12.5 kHz ch, 2 signal method)
Blocking	- 20 dBm (+/- 2 MHz, +/- 10 MHz, +/- 5%, 2 signal method)
DO output level	L = GND, H = 2.8 V
RSSI rising time	30 ms (25 kHz shift), 50 ms (at power on)
Time until valid Data-out	50 ms (25 kHz shift), 70 ms (at power on)
RSSI out	310 mV at -100 dBm, 240 mV at -110 dBm

Specifications are subject to change without prior notice