

With its innovative design, the BD505LF has better performance than analogue radios. Due to excellent reception sensitivity, the communications range is further extended. The BD505LF DMR digital radio offers good performance and provides stable communications.

The BD505LF supports both analogue and digital mode. Users can switch between the two operating modes quickly and easily. Use of digital coding and correction technology makes it possible to transmit human voices without any interference noise over large distances.



Specifications

General

Frequency Range	UHF: 446 MHz
Supported operating modes	<ul style="list-style-type: none"> DMR Tier I (license-free DMR) ETSI TS 102 361-1/2/3 Analogue PMR446
Channel capacity	8
Zone capacity	3
Channel spacing	12.5 kHz (analogue) 25 kHz (digital)
Operating voltage	7.2 V
Battery service life (5/5/90 duty cycle)	approx. 16 h (digital) approx. 12 h (analogue)
Standard battery	1500 mAh (lithium-ion battery)
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H × W × D) (without antenna)	108 × 54 × 29 mm
Weight (with antenna and standard battery)	approx. 220 g

Environmental

Operating temperature range	- 30°C to + 60°C
Storage temperature range	- 40°C to + 85°C
ESD	IEC 61000-4-2 (level 4), ± 8 kV (contact), ± 15kV (air)
Protection against dust and moisture	IP54
Shock and vibration resistance	MIL-STD-810 G standard
Relative humidity	MIL-STD-810 G standard

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.

Receiver

Sensitivity (analogue)	0.22 µV (typical) (12 dB SINAD) 0.4 µV (typical) (20 dB SINAD)
Sensitivity (digital)	0.22 µV / BER 5%
Adjacent channel selectivity (ETSI)	60 dB at 12.5 kHz
Intermodulation	65 dB at 12.5 kHz
Spurious response rejection (ETSI)	70 dB at 12.5 kHz
Signal-to-noise ratio (S/N)	40 dB at 12.5 kHz
Nominal audio power output	0.5 W
Nominal audio distortion	≤ 3%
Audio sensitivity	+ 1 dB at - 3dB
Conducted spurious emission	< -57dBm

Transmitter

Transmitting power	0.5 W
Modulation	11K0F3E at 12.5 kHz 16K0F3E at 25 kHz
4FSK Digital Modulation	12.5 kHz (data only): 7K60FXD 12.5 kHz (data and voice): 7K60FXW
Interfering signals and harmonics	- 36 dBm (< 1 GHz) - 30 dBm (> 1 GHz)
Modulation limiting	± 2.5 kHz at 12.5 kHz ± 5.0 kHz at 25 kHz
Noise cancellation	40 dB at 12.5 kHz 45 dB at 25 kHz
Adjacent channel selectivity	60 dB at 12.5 kHz 70 dB at 25 kHz
Audio sensitivity	+ 1dB at - 3dB
Nominal audio distortion	≤ 3 %
Digital vocoder type	AMBE+2™
Digital protocol	ETSI-TS102 361-1, 2, 3

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