



F - Series

F50EX008-2 Military 225-400 MHz Radio

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Overview:

The FreeWave Technologies military products are designed to meet the rigorous demands of military and government users world wide. This user-configurable 225-400 MHz product is available as OEM board level radio. It is used in applications ranging from UAV's to UGV's and more. FreeWave military products share the same features as our other radios that assure data transmission such as 32 bit CRC error detection with automatic retransmission, 115.2 Kbps throughput, high speed hopping and More. All radios are designed, manufactured and 100% tested at FreeWave's world class manufacturing facility in Boulder, Colorado.

Features:

- Frequency Hopping Spread Spectrum.
- Long Range: 60 mile line of sight range, ability to extend through repeaters.
- Error Free Communications: 32 bit CRC with automatic retransmission.
- Industrial Grade Specifications: 100% tested for RF performance from -40°C to $+75^{\circ}\text{C}$.
- Repeater and simultaneous Slave and Repeater function all in a single radio.
- RS232 / 485 / 422 interface.
- 9.5 to 30 VDC.
- Noise Immunity: Superior performance in noise congested environments.
- Secure: Proprietary spread spectrum technology prevents detection and unauthorized access.
- TDMA Available.



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F50EX008-2 Military 225 - 400 MHz Technical Specifications

Transmitter				
Frequency Range	225-400 MHz			
Output Power	4 Watt (average)			
Range, Line of Sight	60 miles			
Modulation	2 level GFSK			
Occupied Bandwidth	230 kHz			
RF Connector	SMA			
Receiver				
Sensitivity	-103 dBm @ BER 10 ⁻⁶			
Selectivity	20 dB at fc +/- 230 kHz			
System Gain	139 dB exclusive of antennas			
Data Transmission				
Error Detection	32 bit CRC, Retransmit on error			
Data Encryption	Proprietary Spread Spectrum Technology			
Maximum Throughput	115.2 Kbps			
Data Interface	RS232 / 485 / 422			
Power Requirements				
Operating Voltage	9.5 to 30VDC			
Current [mA]	Mode	9.5 VDC	12VDC	30 VDC
	Transmit	3.2 A	2.5 A	750 mA
	Receive	315 mA	250 mA	100 mA
General Information				
Operating Temperature Range	-40 °C to +75 °C or -40° C to +90° C available			
Dimensions	128 mm L x 62 mm W x 20 mm H			
Weight	200 g			
Humidity	0 to 95% non-condensing			

** This device is regulated under the U.S. International Traffic in Arms Regulation (ITAR). These regulations control the Export and Import of the defense articles. The device may only be sold or transferred to a non-U.S. party (in the U.S. or abroad) after authorization is obtained from the U.S. Department of State. Customer (a) agrees to comply with ITAR regulations and (b) shall be responsible for obtaining all necessary U.S. Government authorizations required to ensure compliance with these and other applicable U.S. Laws. Please Contact FreeWave for export control information for specific products.

