

2.5 to 5.0 GHz Digital Instantaneous Frequency Measurement Unit

P/N: FM020511-002

Features

- 2.5 GHz Frequency Range
- 1.45 MHz Resolution
- 11 Bit Data Word
- 50 ns RF Pulse Capable
- -13 dBm Sensitivity
- 23 dB Dynamic Range
- Simultaneous Signal Detection Flag
- Small Form Factor
- Low Weight
- Low Power Consumption
- Designed for Airborne Applications



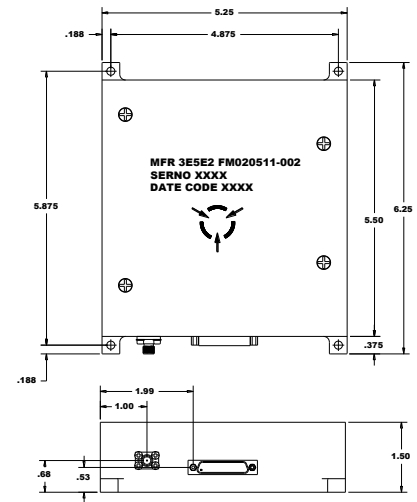
Description

The FM020511-002 DIFM is an octave band DIFM, with high resolution and accuracy. The operational frequency range of this DIFM is an ideal baseband for a broadband Electronic Warfare system. The FM020511-002 DIFM provides an 11-bit digital output word of the RF input frequency. The unit is capable of handling pulses as short as 50 ns up to CW. The nominal frequency resolution is 1.45 MHz, with an RMS accuracy of <2.0 MHz. This is ideal for separating RF pulse trains in a high signal density environment.

Designed for very demanding Airborne Fighter applications, this unit will operate over a temperature range of -40°C to +85°C. Please contact the factory for other available configurations.

Electrical Specification

Ref	PARAMETERS	SPECIFICATION	Notes
1	Operating Frequency Range	2.5 to 5.0 GHz	1
2	Unambiguous Bandwidth	2227 to 5096 MHz	2
3	Frequency Resolution	1.45 MHz	
4	Digital Frequency Word	11 Bits	
5	Throughput Time	100 ns	
6	RF Input Dynamic Range	-13 to +10 dBm	
7	RF Input Signal/Noise Ratio	+3 dB	
8	RF Input Pulse Width	50 ns to CW	
9	Recovery time	50 ns	
10	RF Input VSWR	2.0:1	
11	Frequency Error (RMS) +3 dB SNR	2.0 MHz	3
12	Frequency Peak Error +3dB SNR	7.0 MHz	
13	Simultaneous Signal: Level	6 dB, 98% Valid Rate	4
14	Temperature Range (operating)	-40 to +85°C	
15	Power Supply Current: +12V Rail	500 mA	
16	Power Supply Current: -15V Rail	100 mA	
17	Power Supply Current: +5V Rail	700 mA	
18	Weight	2.85 pounds	



Dimensions in Inches

Notes

- 1 Frequency accuracy is guaranteed over the operating frequency range.
- 2 Frequency is calculated from the digital word with the formula: $Frequency (MHz) = 2227.925 + 1.45 * (Digital Word)$
- 3 RMS calculation is based on the sum of all valid measurements.
- 4 Simultaneous Signal valid rate is based on the percentage of all frequency combinations that result in the larger signal being measured accurately to within 15 MHz.