



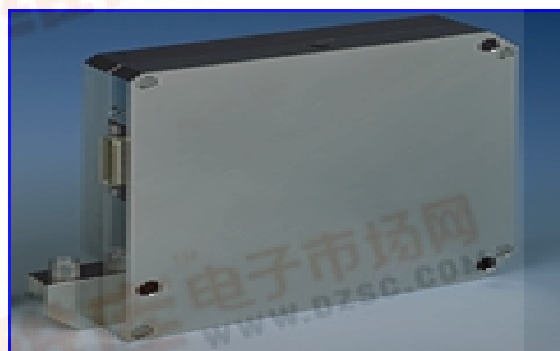
Filtronic

PRODUCT TECHNICAL INFORMATION

DIGITAL FREQUENCY DISCRIMINATORS

FEATURES:

- 12 BIT RESOLUTION
- FULL BAND COVERAGE (2 GHz TO 18 GHz)
- WIDE DYNAMIC RANGE
- HIGH INTEGRITY
- HIGH DATA RATE
- MINIATURE PACKAGE STYLE



TYPICAL FCL D.F.D. (I.F.M.)

DESCRIPTION:

Filtronic Components Limited manufacture a range of Instantaneous Frequency Measurement (IFM) receivers for a wide range of defence applications. Since the early 1980s FCL has supplied hundreds of products, utilising FCL's proprietary three phase discriminators, to major ESM and RWR programs around the world.

A number of standard models are available to cover the common frequency bands. They measure the frequency of an RF input signal with up to 12 bit resolution on a single RF pulse as short as 50 nsec.

FCL receivers are available with PMOP detection, FMOP detection and Pulse on CW. There are self-triggering and externally triggered models along with more sophisticated CW-riding threshold units. Clocked units are available with clock speeds of up to 50 MHz. A hybrid approach has also been adopted which combines the benefits of clocked and internally triggered measurement.

The unique discriminator design allows FCL to obtain 12 bit frequency resolution across 2 GHz to 18 GHz, over 60 dB dynamic range, in a volume of ~660 cc (approximately 40 cu in).

For further information contact the sales office at the address shown overleaf.



CHARACTERISTICS

Typical Digital Frequency Discriminators (I.F.M.s) available from FCL.

Type Code	DR024	DR045	DR048	DR050	DR051	DR053
Frequency Range (GHz)	2-18	2-18	8-18	2-18	2-18	2-7.3
Unambiguous bandwidth (GHz)	17.0	17.0	11.0	16.5	16.5	5.5
No. Of Bits (frequency)	12	13	6	13	13	8
Resolution (MHz)	3.93	2	150	2	2	20.78
Accuracy (MHz RMS)						
At ambient.	----	----	<200	----	-----	-----
Over temperature	4.5	3.5	<200	3.5	3.5	<60
Dynamic range (dBm)	-50 to +10	-34 to +10	-43 to +5	-55 to +5	-50 to +10	+11 to +15
Signal / noise	+3	+3	+16	+3	+3	+16
Pulse widths	50ns-CW	50ns-CW	100ns-CW	50ns-CW	50ns-CW	100ns-CW
Triggering	INT/EXT	EXT	EXT	INT/EXT	INT/EXT	EXT
Temperature Range (celsius)	-40 to +85	-40 to +85	-20 to +50	0 to +70	0 to +60	-40 to +80
Power (W)	18.5	15	1.2	31	20	5
Data format	RS422	TTL	TTL	3.3LVDS	TTL	TTL
Size (mm)	152x147x30	162x140x30	101x63x8	260x175x30	260x175x30	110x105x20
Weight (gms)	1550	1550	125	2500	2200	1800