



Planar Monolithics Industries, Inc.

RF & Microwave Components and Modules to 40GHz

Digitally Tuned Oscillator PMI Model No. DTO-218-CD-1



PMI Model No. DTO-218-CD-1 is a digitally controlled oscillator (DTO's) covering the frequency range of 2.0GHz to 18.0GHz. This model is designed to withstand stringent military ground or airborne environments. Incorporated in the design is the latest internal digital calibration techniques such that frequency drift over the operating temperature range is minimal. This unit offers fast switching speeds and a stable frequency output with low phase noise.

Specifications:

Frequency Range	2.0 to 18.0GHz
Frequency Accuracy	$\pm 2.0\text{MHz}$ Max. @ +25C
Frequency Drift	$\pm 0.1\text{MHz/C}$ Max.
Frequency Settling	$\pm 3.0\text{MHz}$ Max. within 1usec.
Modulation:	
Bandwidth	DC to 9MHz Min.
Sensitivity Variation	1.1:1 Max.
Frequency Deviation Bandwidth	400MHz Min. @ 2V peak-peak
RF Power:	
Output	+10dBm Min.
Variation	$\pm 3.0\text{dB}$ Max. Including temperature and frequency
Phase Noise	-60dBc/Hz typ. @ 100kHz offset
Harmonics	-20dBc Max.
Spurious	-55dBc Max.
Pulling	$\pm 1\text{MHz}$ Max. @ VSWR 2:1
Pushing	$\pm 500\text{kHz/V}$ Max.
Linearized Frequency Tuning Step Size	LSB 0.5MHz Nominal for full-band
DC Power	+15V \pm 0.5V
	-15V \pm 0.5V
	+5V \pm 0.5V
	+28V \pm

Environmental Ratings:

Temperature:	-40°C to +70 °C Operating
	-40°C to +100 °C Non-Operating
Humidity:	MIL-STD-202F, Method 103B Cond. B
Shock:	MIL-STD-202F, Method 213B Cond. B
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A



PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F Grove Road, Frederick, Maryland 21704 USA | Tel: 301-662-5019 | Fax: 301-662-1731

Email: sales@pmi-rf.com | www.pmi-rf.com

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