IDT Integrated Device Technology

MEMS Oscillators: 4M Series

POWER MANAGEMENT | ANALOG & RF | INTERFACE & CONNECTIVITY | **TIMING & SYNCHRONIZATION** | MEMORY & LOGIC | DATA CONVERSION

5032 Packages!

< 1 ps Phase Jitter!

MEMS Oscillator 212.50 MHz LVDS

MEMS Oscillator 156.25 MHz LVPECL

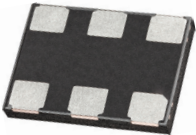140.000 D06

233 D3 125.000

166629 2SA

- **Low Jitter**
- **Low Cost**
- **Fast Lead Times**
- **Standard Packages**

BENEFITS / FEATURES

- **Short lead times**
  – Enables Just-In-Time inventory management
- **Standard differential outputs**
  – LVDS, LVPECL
- **Standard package sizes**
- **Low Phase Jitter**
  – < 1.0 ps rms (12 kHz to 20 MHz)
- **± 50 ppm Frequency Stability**
- **Shock and vibration resistant**
- **Up to 40x higher reliability than Quartz**
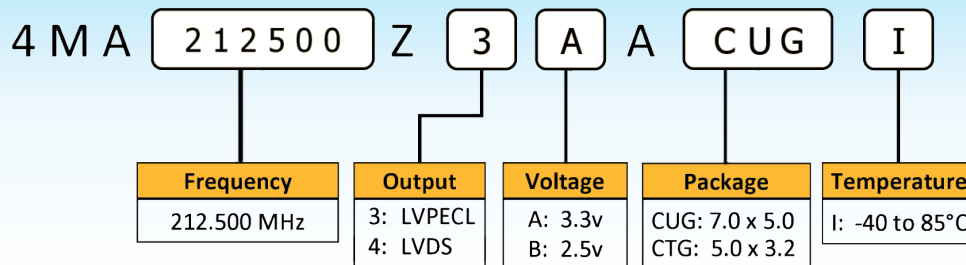
www.idt.com/go/MEMS

LVDS LVPECL	5032	7050
Package Size	5.0 x 3.2 mm	7.0 x 5.0 mm
Supply Voltage	2.5 or 3.3 V	2.5 or 3.3 V
Frequency Range	50 MHz ~ 625 MHz	50 MHz ~ 625 MHz
Frequency Stability	± 50 ppm	± 50 ppm
Temperature Range	-40 to +85˚C	-40 to +85˚C

Standard Frequencies (MHz)

100	106.25	125	133.33	148.5	150	155.52	156.25
159.375	160	161.133	187.5	200	212.5	250	312.5

ADDITIONAL CUSTOM FREQUENCIES AVAILABLE UPON REQUEST

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PART ORDERING GUIDELINE

4 M A | 2 1 2 5 0 0 | Z | 3 | A | A | C U G | I

Frequency	Output	Voltage	Package	Temperature
212.500 MHz	3: LVPECL 4: LVDS	A: 3.3v B: 2.5v	CUG: 7.0 x 5.0 CTG: 5.0 x 3.2	I: -40 to 85°C

PACKAGE OUTLINE AND DIMENSIONS

5.0 x 3.2 mm

3.2 | 1.00 | 0.85
5032 SMD | 5.0
0.64 | 1.27 | 0.91

7.0 x 5.0 mm

5.0 | 1.30 | Pin #1 ID R 0.45° | 0.85
7050 SMD | 7.0
1.50 | 2.54 | 0.20
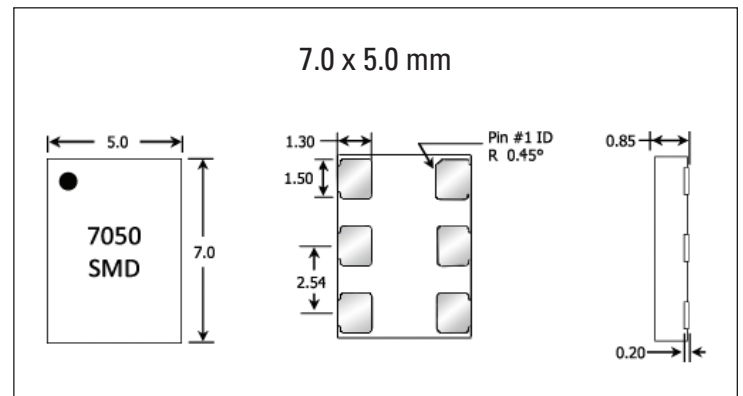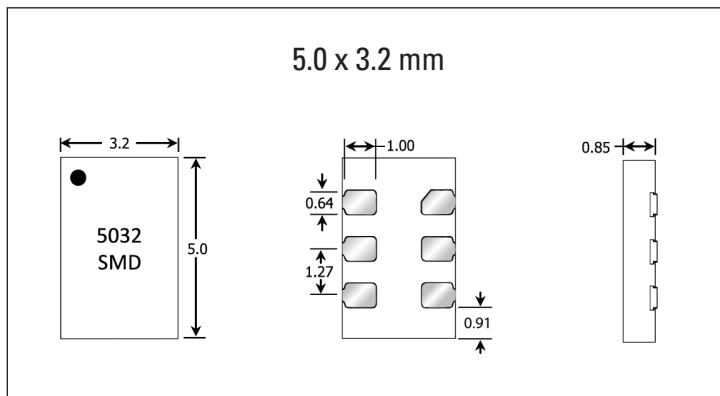
MEMS OSCILLATOR EVALUATION BOARD

FEATURES

- Differential SMA output
- Standard banana plug power connectors
- Available in standard 5032 and 7050 size packages
- Selectable output termination for both LVDS and LVPECL
- Switch control for Output Enable (OE)
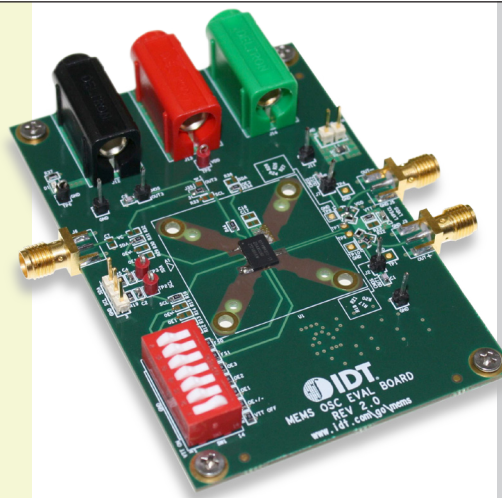
The MEMS Oscillator Evaluation Board is designed to provide a convenient platform to quickly evaluate the performance and operation of IDT's family of MEMS oscillators. The board includes provisions for LVPECL and LVDS termination and can also be configured to terminate directly into a 50 Ω oscilloscope. For VTT terminated LVPECL, a separate bias voltage (VDD - 2V) is also generated onboard for measurement convenience.

TECHNICAL SUPPORT

EMAIL: MEMS_Support@idt.com   WEBSITE: www.idt.com/go/MEMS

PB_MEMS4M_REVB0413