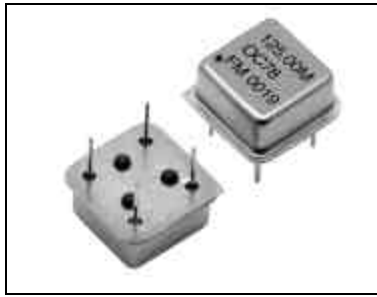


FMOC78 SERIES

5.0 Vdc Clock Oscillators

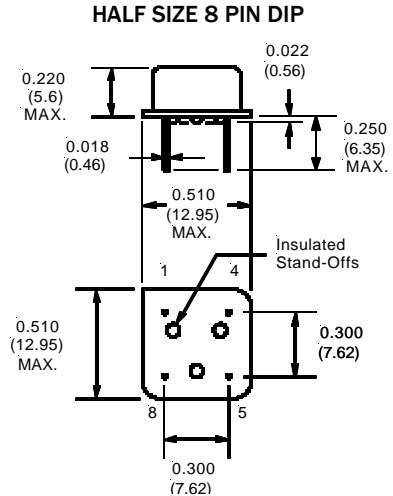
8 PIN DIP



- High Frequency via Multiplier*
- 3.3 Vdc Supply Voltage Option
- HCMOS/TTL Compatible
- Lower Cost*

SPECIFICATIONS

| Parameter | Specification | | | | | | | | | | | | |
|---|--|-------|-----------|--------|------------|------|------------|-------|-----------|--------|-----------|------|------------|
| Frequency Range | 60.0 to 160.0 MHz (100MHz max @ +3.3 Vdd) | | | | | | | | | | | | |
| Overall Frequency Tolerance | ±20 ppm to ±100 ppm (Inclusive of Operating Temp., Supply Voltage, & Load) | | | | | | | | | | | | |
| Operating Temperature Range | 0 to +70°C Std. (See Temp. Range Options) | | | | | | | | | | | | |
| Storage Temperature | -55 to +125°C | | | | | | | | | | | | |
| Supply Voltage (Vdd) | +5.0 Vdc (±0.5 Vdc) or +3.3 Vdc (±0.3 Vdc) | | | | | | | | | | | | |
| Supply Current (Icc) | 30 mA max. @ 60.0 to 99.9 MHz 50 mA max. @ 100.0 to 149.9 MHz 60 mA max. @ 150.0 to 160.0 MHz | | | | | | | | | | | | |
| Symmetry (Duty Cycle) | 40/60% Std., 45/55% Avail. (See Spec. Option S) | | | | | | | | | | | | |
| Output "0" Level (Vol) | 0.4 Vdc max. (TTL) 0.5 Vdc max. (HCMOS) (0.3 Vdc max @ +3.3 Vdd) | | | | | | | | | | | | |
| Output "1" Level (Voh) | 2.4 Vdc min. (TTL) 4.5 Vdc min. (HCMOS) (3.0 Vdc min @ +3.3 Vdd) | | | | | | | | | | | | |
| Rise and Fall Time | 10 ns max. < 5 ns typical | | | | | | | | | | | | |
| Start Time | 10 ms max. < 5 ms typical | | | | | | | | | | | | |
| Output Load | 10 TTL / 15 pF HCMOS | | | | | | | | | | | | |
| Jitter (typical) | < 25 pico seconds, one sigma | | | | | | | | | | | | |
| Phase Noise (typical) | <table border="1"> <tr><td>10 Hz</td><td>-75dBc/Hz</td></tr> <tr><td>100 Hz</td><td>-105dBc/Hz</td></tr> <tr><td>1kHz</td><td>-100dBc/Hz</td></tr> <tr><td>10kHz</td><td>-90dBc/Hz</td></tr> <tr><td>100kHz</td><td>-95dBc/Hz</td></tr> <tr><td>1MHz</td><td>-120dBc/Hz</td></tr> </table> | 10 Hz | -75dBc/Hz | 100 Hz | -105dBc/Hz | 1kHz | -100dBc/Hz | 10kHz | -90dBc/Hz | 100kHz | -95dBc/Hz | 1MHz | -120dBc/Hz |
| 10 Hz | -75dBc/Hz | | | | | | | | | | | | |
| 100 Hz | -105dBc/Hz | | | | | | | | | | | | |
| 1kHz | -100dBc/Hz | | | | | | | | | | | | |
| 10kHz | -90dBc/Hz | | | | | | | | | | | | |
| 100kHz | -95dBc/Hz | | | | | | | | | | | | |
| 1MHz | -120dBc/Hz | | | | | | | | | | | | |
| Pin 1 Options (See Spec. Option T below) | No Connect (Std.) Tri-State (option T) VIH: 2.2 V or Open Enables Output VIL: 0.8 V Disables Output Output Disable/Enable Time: 100 nS max. | | | | | | | | | | | | |
| Aging @ 25°C | ±5ppm max first year | | | | | | | | | | | | |



PIN FUNCTION TABLE

| Pin | Function |
|-----|----------------------|
| 1 | NC or Tri-State |
| 4 | Case Ground |
| 5 | Output |
| 8 | Supply Voltage (Vdd) |

* All specifications for 5.0 Vdc supply voltage unless otherwise noted.
All specifications subject to change without notice.

NOTE: Waveforms & Test Circuits on pages 48, 49

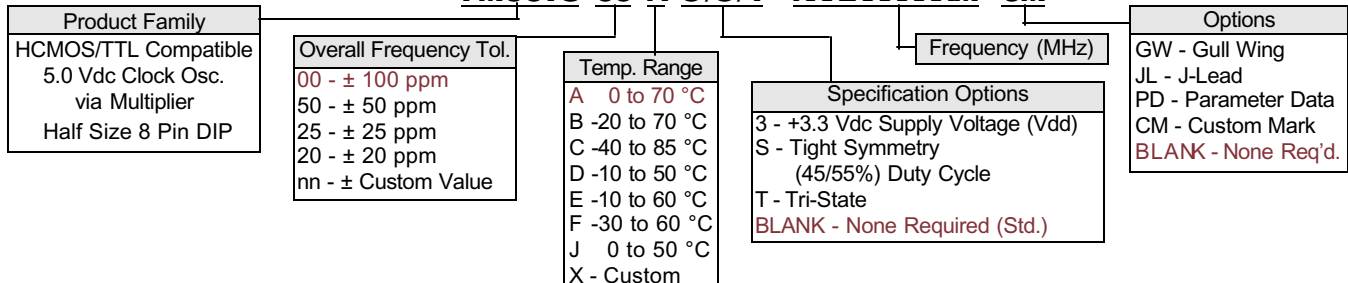
Standard Specifications for product indicated in color

Dimensions: $\frac{\text{Inches}}{\text{(mm)}}$

PART NUMBERING SYSTEM

MARKING: See Page 57, Format H

FMOC78 00 A 3/S/T- XXX.XXXXXM -CM



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