

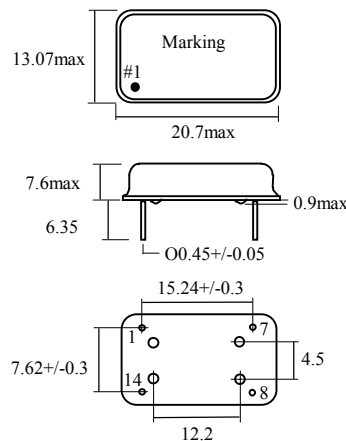
**MPF & MEF Series**  
**DIP-14 PECL/ECL Crystal Oscillators**

- FEATURES**
- Hermetically Sealed Metal in Thru-Hole Package
  - 5V, 3.3V, -5.2V, Complementary/Tri-State Option
  - Low Jitter, Wide Frequency/Temperature Range

**SPECIFICATIONS** (subject to change w/o notice)

Parameters	Model MPF: 5V & 3.3V ( $V_{DD}$ )	Model MEF: -5.2V ( $V_{EE}$ )
Frequency Range	19.440MHz ~ 700MHz	
Operating Temp.	0°C ~ +70°C to -40°C ~ +85°C	
Storage Temp.	-55°C ~ +125°C	
Supply Voltage	5V±5% @ 100mA max, 3.3V±5% @ 80mA max	-5.2V±5% @ 100mA max
Frequency Stability	±25 ~ 100ppm (includes 25°C tolerance & changes due to temperature, supply, load, vibrations, etc.)	
Aging	±3ppm max per year	
Output Load	50Ω max to $V_{DD}$ - 2.0V or Thevenin equivalent	
Output Logic Levels	$V_{OL} = V_{DD} - 1.62V$ max $V_{OH} = V_{DD} - 1.02V$ min	$V_{OL} = V_{EE} + 3.60V$ min $V_{OH} = V_{EE} + 4.20V$ max
Duty Cycle	40/60% ~ 45/55%	
Period Jitter (max)	25ps absolute; 4ps one-sigma	
Rise/Fall Time	2nsec max (20% to 80% waveform)	
Start-up Time	10 msec max	
Tri-State E/D I/P	NC or $V_{OH}$ enables O/P; $V_{OL}$ disables O/P (high impedance)	
Pin-Out	1: NC or E/D or Q2; 7: GND (MPF) or $V_{EE}$ (MEF); 8: Q1; 14: $V_{DD}$ (MPF) or GND (MEF)	

**OUTLINE**  
(mm) not to scale



**PART NUMBERING**

Model	Supply	Frequency	Stability	Temperature	Duty Cycle	O/P Configuration	Others
MPF	5: 5V 3.3: 3.3V	MHz Value	±PPM Value	Blank: 0C ~ +70C M: -20C ~ +70C N: -30C ~ +75C I: -40C ~ +85C	Blank: 40/60 T: 45/55	Blank: Q1 only Y: Q1 & Q2 Z: Q1 & E/D <u>Note:</u> Q2 is complementary	Custom Inquiries
MEF	Blank: -5.2V						
<b>Example: MPF5-155.52-100</b>			<b>Please Consult Microcom Devices Ltd. for Custom Specifications</b>				