



MX573ABH53M1250

Ultra-Low Jitter 53.125MHz LVC MOS XO

ClockWorks® FUSION

General Description

The MX573ABH53M1250 is an ultra-low phase jitter XO with LVC MOS output optimized for high line rate applications.

Features

- 53.125MHz LVC MOS
- Typical phase noise:
 - 100fs (Integration range: 1.875MHz-20MHz)
- ±50ppm total frequency stability
- -40°C to +85°C temperature range
- Industry standard 6-Pin 7mm x 5mm LGA package

Absolute Maximum Ratings

| | |
|--|-------|
| Supply Voltage (VIN)..... | +4.6V |
| Lead Temperature (soldering, 10s)..... | 260°C |
| Storage Temperature (T _s)..... | 125°C |
| ESD Rating (HBM)..... | 2kV |

Operating Ratings

| | |
|-------------------------------|-------------------|
| Supply Voltage (VIN)..... | +2.375V to +3.63V |
| Ambient Temperature (TA)..... | -40°C to +85°C |

Electrical Characteristics

VDD = 2.375 - 3.63V, TA = -40°C to +85°C, output terminated with 50 Ohms to VDD/2.¹

| Symbol | Parameter | Condition | Min. | Typ. | Max. | Units |
|--------|---------------------|---|-----------|------------|-----------|-------|
| IDD | Supply Current | | | | 95 | mA |
| F0 | Center Frequency | | | 53.125 | | MHz |
| | Frequency Stability | Note 2 | | | ±50 | ppm |
| ∅j | Phase Noise | Integration Range (12kHz to 20MHz) Integration Range (1.875MHz to 20MHz) | | 220 100 | | fsRMS |
| Tstart | Start-Up Time | | | | 20 | ms |
| TR/TF | Rise/Fall time | | 100 | | 500 | ps |
| | Duty Cycle | | 45 | | 55 | % |
| VIH | Input High Voltage | 3.3V Operation | 2 | | VDD + 0.3 | V |
| VIL | Input Low Voltage | 3.3V Operation | -0.3 | | 0.8 | V |
| VOH | Output High Voltage | LVC MOS output levels | VDD - 0.8 | | | V |
| VOL | Output Low Voltage | LVC MOS output levels | | | 0.6 | V |

Notes:

1. Guaranteed after thermal equilibrium.
2. Inclusive of initial accuracy, temperature drift, aging, shock, vibration.

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May 31, 2017
MX573AB1-5317

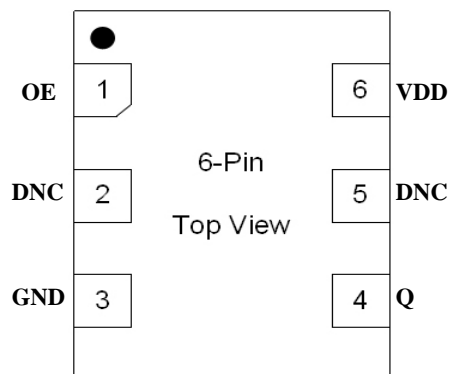
Revision 1.0
tcghelp@microchip.com

Ordering Information

| Ordering Part Number | Marking Line 1 | Marking Line 3 | Shipping | Package |
|----------------------|----------------|----------------|---------------|---------------------|
| MX573ABH53M1250 | MX573AB | H53M1250 | Tube | 6-Pin 7mm x 5mm LGA |
| MX573ABH53M1250-TR | MX573AB | H53M1250 | Tape and Reel | 6-Pin 7mm x 5mm LGA |

Devices are Green and RoHS compliant. Sample material may have only a partial top mark.

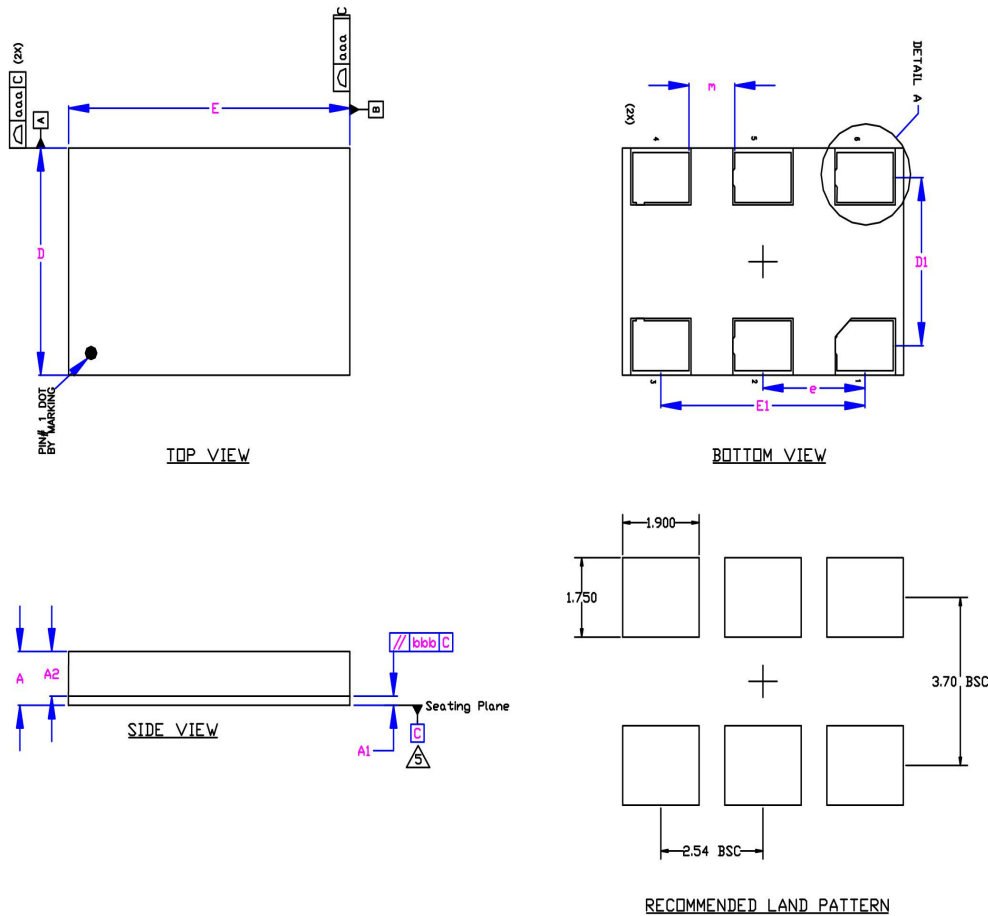
Pin Configuration



Pin Description

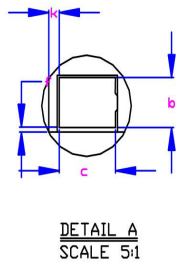
| Pin Number | Pin Name | Pin Type | Pin Level | Pin Function |
|------------|----------|----------|-----------|--|
| 1 | OE | I, SE | LVC MOS | Output Enable, disables output to tri-state, 1 = Disabled, 0 = Enabled, 50k Ohms Pull-Down |
| 2 | DNC | | | Make no connection, leave floating. |
| 3 | GND | PWR | | Power Supply Ground |
| 4, 5 | Q, DNC | O, SE | LVC MOS | Clock Output Frequency = 53.125MHz |
| 6 | VDD | PWR | | Power Supply |

Package Information and Recommended Land Pattern for 6-Pin LGA³



| Dimensional Tol. | |
|------------------|-------|
| aaa | 0.100 |
| bbb | 0.070 |

| Dimensional Ref. | | | |
|------------------|-----------|-------|-------|
| REF. | Min. | Nom | Max. |
| A | 1.260 | 1.330 | 1.400 |
| A1 | 0.190 | 0.230 | 0.270 |
| A2 | 1.070 | 1.100 | 1.130 |
| D | 4.900 | 5.000 | 5.100 |
| D1 | 3.700 BSC | | |
| E | 6.900 | 7.000 | 7.100 |
| E1 | 5.000 BSC | | |
| b | 1.050 | 1.100 | 1.150 |
| c | 1.350 | 1.400 | 1.450 |
| e | 2.540 BSC | | |
| f | 0.050 | 0.100 | 0.150 |
| k | 0.210 | 0.260 | 0.310 |
| m | 1.090 | 1.140 | 1.190 |
| n | 36 | | |



- Notes
1. Dimensioning and Tolerancing per ASME Y14.5M-1994.
 2. Dimensions are in millimeters.
 3. 'e' represents the basic LGA pitch
 4. 'n' is the maximum no. of Land for a specified Package.
 5. Package warp shall be 0.150 max.
 6. Substrate base is BT Resin
 7. The Pin#1 corner must be identified on top side only.
 8. Reference Jeduc Spec M1-221
 9. Land pattern tolerance is 0.05mm unless otherwise specified

6-Pin LGA (7x5mm)

Note:

3. Package information is correct as of the publication date. For updates and most current information, go to www.microchip.com.

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