

ULTRA MINIATURE PLASTIC PACKAGE PURE SILICON™ CLOCK OSCILLATOR

ASDM



Life Size
 2.5 x 2.0 x 0.80mm



- FEATURES:**
- Ultra Miniature Pure Silicon™ Clock Oscillator
 - MEMS Technology by Discera
 - Low Power Consumption <10mA
 - Exceptional Stability Over Temp. at 40 to +85°C
 - Available over Extended Operating Temperature
 - Available in 30kG Shock Resistance Configuration
 - Low Cost-Compact QFN Plastic Packaging
 - Compact Package design

- APPLICATIONS:**
- CCD Clock for VTR Camera
 - Equipment Connected to PCs
 - Low Profile Equipment
 - Lower Cost Crystal Oscillator Replacement
 - Computers and Peripherals
 - Portable Electronics (MP3 Players, Games)
 - Consumer Electronics such as TV's, DVR's, etc.
 - Vibrant, Shock-Prone & Humid Environments for Industrial Equipment
 - Demanding Military & Automotive Electronics

STANDARD SPECIFICATIONS:

| PARAMETERS | |
|-------------------------------|---|
| ABRACON P/N: | ASDM Series |
| Frequency range: | 1.000 MHz - 150 MHz |
| Operating temperature: | 0°C to + 70°C (see options) |
| Storage temperature: | -55°C to +150°C |
| Overall Frequency Stability: | ± 100 ppm max. (see options) |
| Supply Voltage (Vdd): | See options |
| Supply Current (No Load) | 3.0mA typ, 10.0mA max (1.0 to 39.9999MHz) 4.0mA typ, 10.0mA max (40.0 to 79.9999MHz) 5.0mA typ, 10.0mA max (80.0 to 124.9999MHz) 6.0mA typ, 10.0mA max (125.0 to 150MHz) (T=+25°C, C _i =0pF, R _L =∞, Vdd=3.3 ± 0.3V, 3.0 ± 0.3V, 2.8 ± 0.2V, 2.5 ± 0.2V, 1.8 ± 0.15V) |
| Symmetry | 45/55 % max.@ 1/2Vdd |
| Rise and fall time (Tr/Tf) | 1.3ns typ, 5ns max. (+25°C, 15pF output load, 20/80% Vdd.) |
| Output load | 15 pF max., 10kohms min. |
| Output voltage | VOH = 0.8* Vdd min. ; VOL = 0.2* Vdd max. |
| Input voltage | VIH = 0.75* Vdd min. ; VIL = 0.25* Vdd max. |
| Start-up time | 3.0ms typ, 10ms max. |
| Disable time | 20ns typ, 100ns max. |
| Tr-istate function (Stand-by) | "1" or open: Oscillation "0" : No oscillation/Hi Z |
| Stand-by Current | 1uA max. |
| Aging at +25°C/year | ± 5ppm max. (T=+25 C, Vdd=3.3 ± 0.3V, 3.0 ± 0.3V, 2.8 ± 0.2V, 2.5 ± 0.2V, 1.8 ± 0.15V) |
| Jitter (reference only): | 100MHz: 95 ps |

| Item | Absolute Maximum Ratings | | | Condition |
|----------------|--------------------------|---------|------|-------------|
| | Min. | Max | Unit | |
| Supply Voltage | -0.3 | +4.0 | V | |
| Input Voltage | -0.3 | VDD+0.3 | V | |
| Junction Temp | - | +150 | °C | |
| Storage Temp | -55 | +150 | °C | |
| Soldering Temp | - | +260 | °C | 40 sec max. |
| ESD | | | | |
| HBM | - | 2000 | V | |
| MM | - | 200 | | |
| CDM | - | 500 | | |

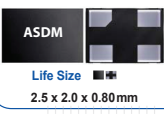
ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 10.15.09**
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

**ULTRA MINIATURE PLASTIC PACKAGE
PURE SILICON™ CLOCK OSCILLATOR**

ASDM



OPTIONS AND PART IDENTIFICATION:

PART NUMBER FOR PROGRAMMED ORDERS

ASDM - Frequency - - -

| Supply Voltage | | Frequency e.g. 14.3181 MHz (Maximum 4 digits after decimal) | Operating Temp. | | Freq. Stability | | Packaging | |
|----------------|-------------|---|-----------------|----------------|-----------------|----------|-----------|---------------------------------|
| 1 | 3.3 ± 0.3V | | | Blank | 0°C to +70°C | Blank | ± 100 ppm | Blank |
| 2 | 3.0 ± 0.3V | E | | -20°C to +70°C | C | ± 50 ppm | T | Tape and Reel (1000pcs/reel) |
| 3 | 2.5 ± 0.2V | L | | -40°C to +85°C | R | ± 25 ppm | | |
| 4 | 1.8 ± 0.15V | | | | | | | |
| 5 | 2.8 ± 0.2V | | | | | | | |

Please contact Abracon for order assistance for high shock application.

PART NUMBER FOR UN-PROGRAMMED ORDERS

Blank un-programmed oscillators and our low cost portable programmer are available for quick turn engineering requirements. Please call ABRACON or visit **MEMSpeed Pro** site <http://www.abracon.com/memspeedpro/memspeedpro.html> for more information.

ASDM - BLANK - - -

| Operating Temp. Freq. Stability | | Packaging | |
|------------------------------------|---------------------------|-----------|------------------------------|
| EC | ± 50 ppm / -20°C to +70°C | Blank | Tube (140pcs/tube) |
| ER | ± 25 ppm / -20°C to +70°C | T | Tape and Reel (1000pcs/reel) |
| LC | ± 50 ppm / -40°C to +85°C | | |
| LR | ± 25 ppm / -40°C to +85°C | | |



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 10.15.09**
30352 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

ULTRA MINIATURE PLASTIC PACKAGE PURE SILICON™ CLOCK OSCILLATOR

ASDM



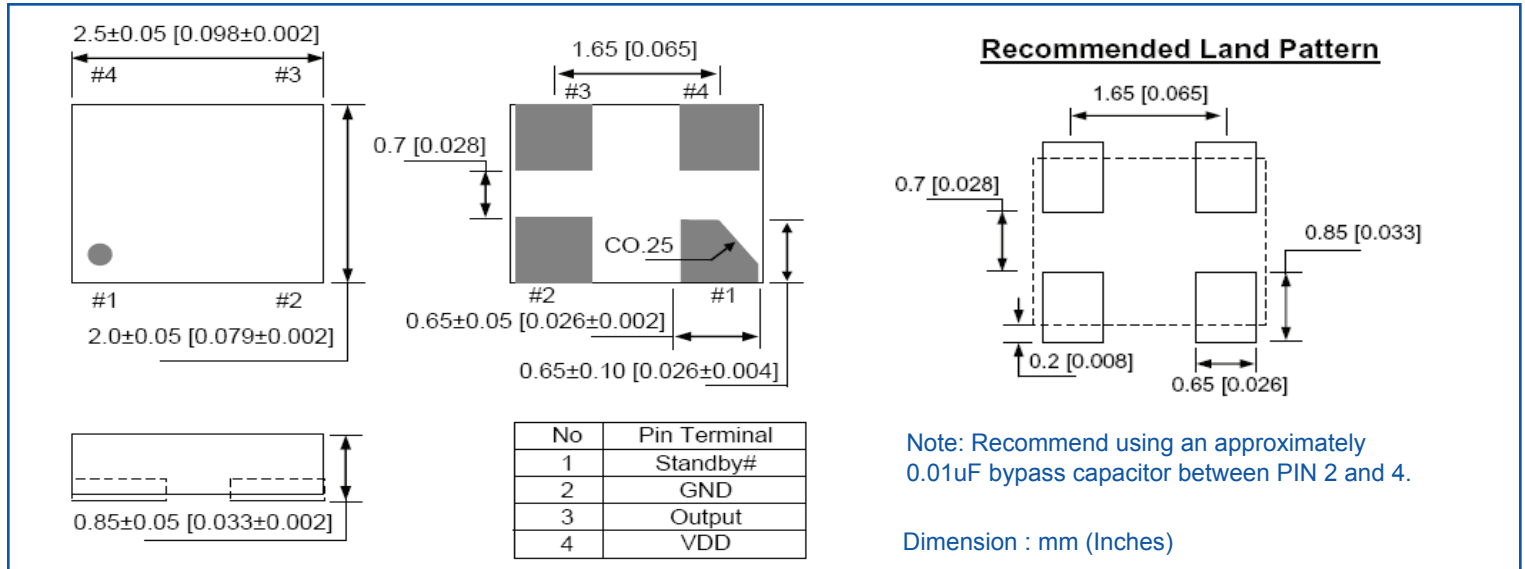
Life Size

2.5 x 2.0 x 0.80mm

ASDM

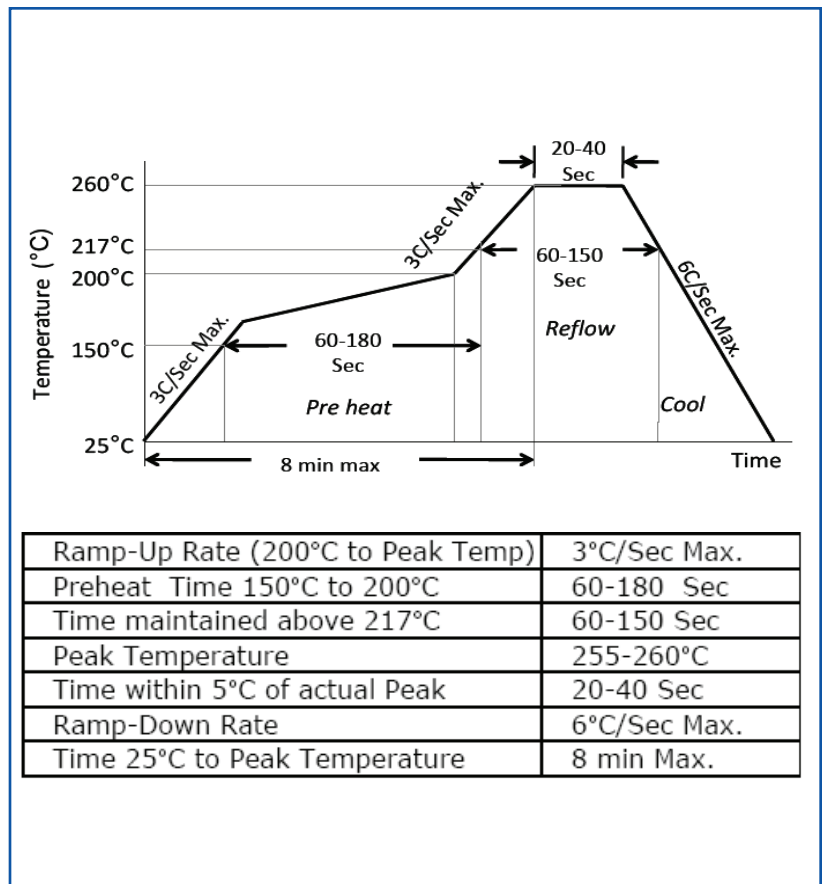
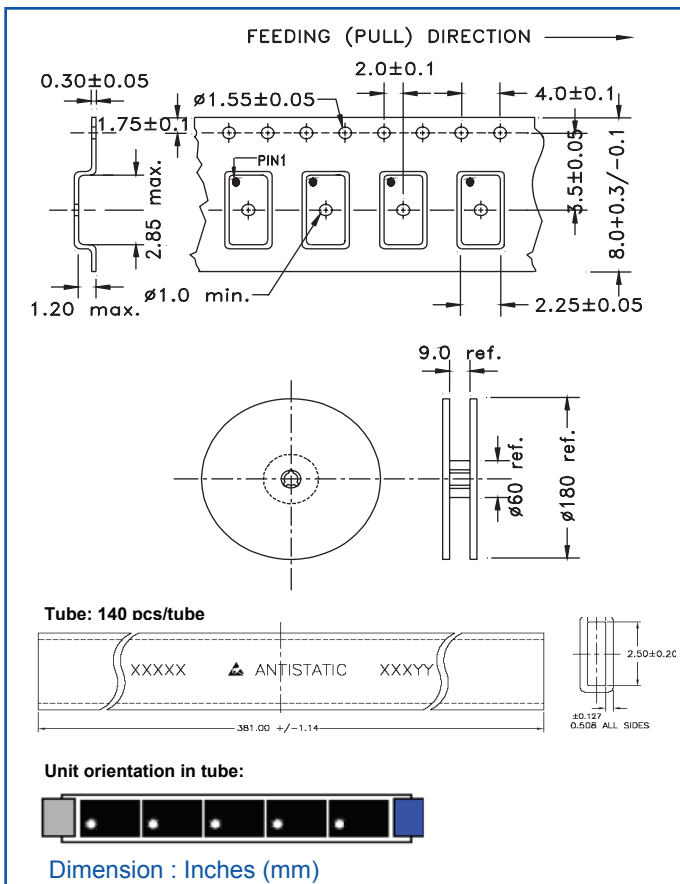


OUTLINE DRAWING:



TAPE & REEL: Tape and reel 1,000pcs/reel

REFLOW PROFILE:



Need a test socket for the ASDM Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#).

NOTE: Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



ABRACON
CORPORATION

Visit www.abracon.com for Terms & Conditions of Sale **Revised: 10.15.09**
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com