

ULTRA MINIATURE PLASTIC PACKAGE PURE SILICON™ CLOCK OSCILLATOR

ASDM



ASDM



RoHS
Compliant

Life Size

2.5 x 2.0 x 0.80mm

**MEMS
Technology!**

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 _L =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

Absolute Maximum Ratings

Item	Min.	Max	Unit	Condition
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



**ABRACON
CORPORATION**

Visit www.abracon.com for Terms & Conditions of Sale **Revised: 10.15.09**
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OPTIONS AND PART IDENTIFICATION:

PART NUMBER FOR PROGRAMMED ORDERS

ASDM□ - Frequency - □ - □ - □

Supply Voltage		Frequency	Operating Temp.		Freq. Stability		Packaging	
1	3.3 ± 0.3V	e.g. 14.3181 MHz (Maximum 4 digits after decimal)	Blank	0°C to +70°C	Blank	± 100 ppm	Blank	Tube (140pcs/tube)
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		

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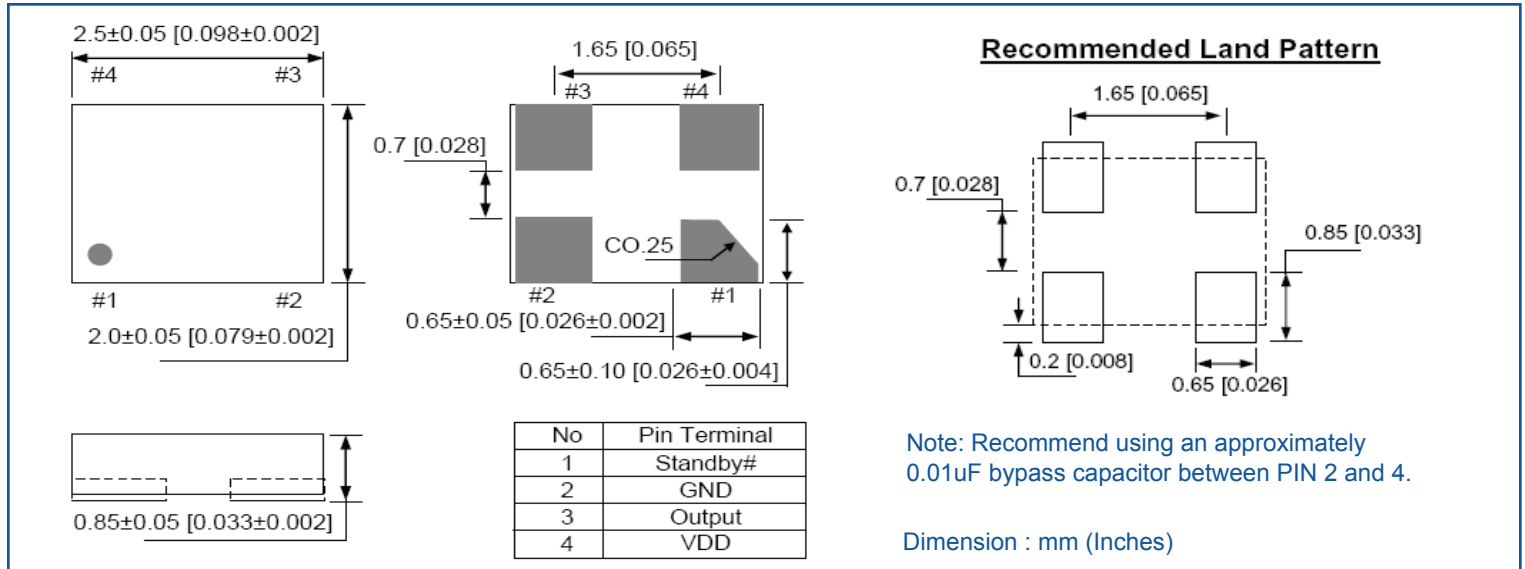
Life Size

2.5 x 2.0 x 0.80mm

ASDM

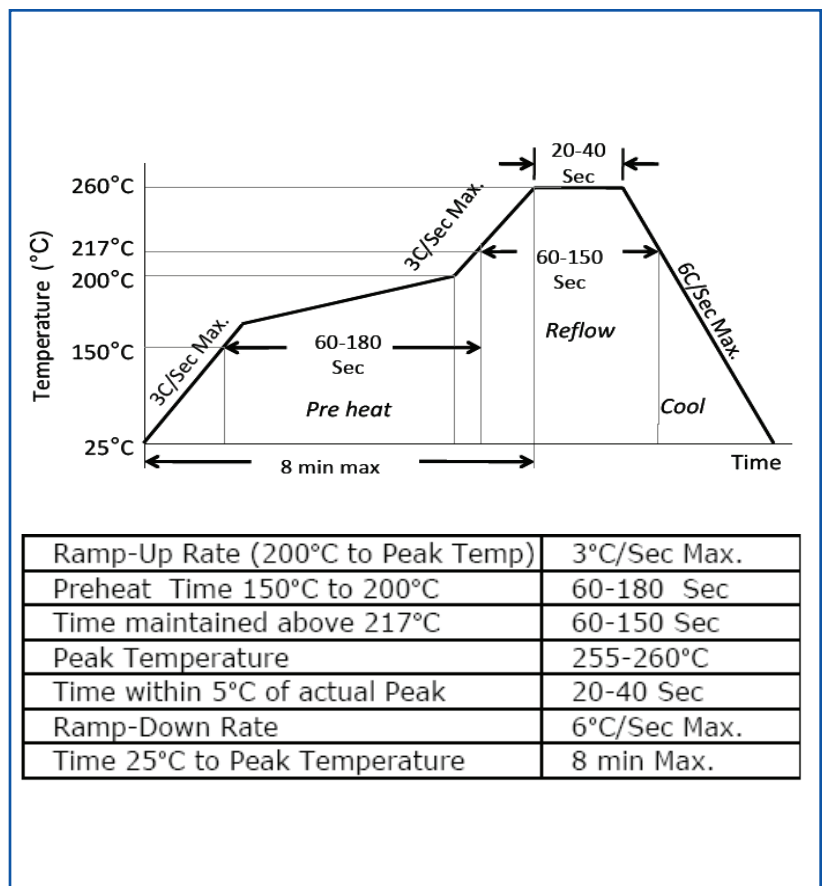
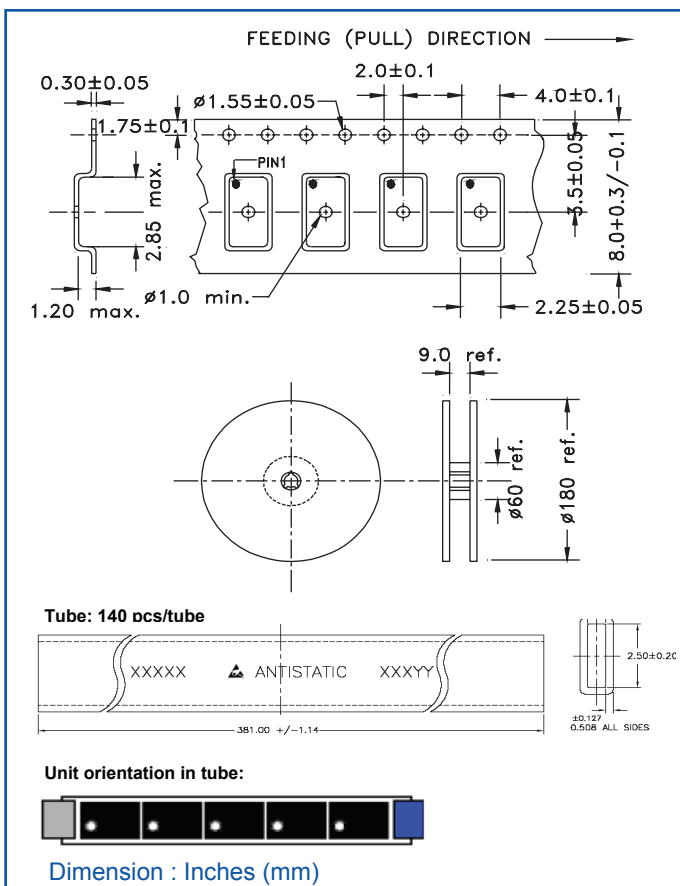


OUTLINE DRAWING:



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.

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