

# ULTRA MINIATURE PLASTIC PACKAGE PURE SILICON™ CLOCK OSCILLATOR

ASDM



ASDM

RoHS  
Compliant

Life Size

2.5 x 2.0 x 0.80 mm

## 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

**MEMSPEED PRO II™**  
Clock Oscillator Programmer  
Available Now!

[Click here for more details](#)

## STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range:		1.0	-----	150	MHz	
Operating Temperature:		0	-----	+70	°C	See options
Storage Temperature:		-55	-----	+150	°C	
Overall Frequency Stability*:		-100	-----	+100	ppm	See options
Supply Voltage (Vdd):		+1.8 ~ +3.3			V	See options
Supply Current (no load):	1.0 to 39.9999MHz	-----	3	10	mA	No load RL=∞ T=25°C
	40.0 to 79.9999MHz	-----	4	10		
	80.0 to 124.9999MHz	-----	5	10		
	125.0 to 150MHz	-----	6	10		
Output Voltage:	V <sub>OH</sub>	0.8*V <sub>dd</sub>	-----	-----	V	15pF
	V <sub>OL</sub>	-----	-----	0.2*V <sub>dd</sub>		
Rise Time:	Tr	-----	1.3	2.0	ns	15pF; T=25°C 20%/80%*VDD
Fall Time:	Tf	-----	1.3	2.0		
Output Load:		15pF max / 10kΩ min.			pF	See options
Symmetry:		45	-----	55	%	@1/2Vdd
Startup Time:		-----	1.5	3.0	ms	
Disable Time:		-----	20	100	ns	
Disable Stand-by Current:		-----	-----	1	uA	
Tri-state Function (Stand-by) :		"1" (VIH≥0.75*Vdd) or Open: Oscillation "0" (VIH<0.25*Vdd) : Hi Z			V	
Cycle to cycle jitter:		-----	95	-----	ps	F=100MHz
Aging:		-5.0	-----	+5.0	ppm	First year

### Absolute Maximum Ratings

Item	Minimum	Maximum	Unit	Condition
Supply Voltage	-0.3	+4.0	V	
Input Voltage	-0.3	Vdd+0.3	V	
Junction Temp.	-----	+150	°C	
Soldering Temp.	-----	+260	°C	40sec max
ESD			V	
HBM		2,000		
MM		200		
CDM		500		

ABRACON IS  
ISO 9001:2008  
CERTIFIED



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Revised: 07.21.11

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## OPTIONS AND PART IDENTIFICATION:

### Programmed Orders (Quantity > 1,000pcs)

ASDM  -  MHz -   -

Supply Voltage	
1:	3.3 ± 0.3V
2:	3.0 ± 0.3V
3:	2.5 ± 0.2V
4:	1.8 ± 0.15V
5:	2.8 ± 0.2V

Frequency in MHz	
e.g. 14.3181 MHz (Maximum 4 digits after decimal)	

Operating Temp.	
Blank:	0°C ~ +70°C
E:	-20°C ~ +70°C
L:	-40°C ~ +85°C

Overall Freq. Stability	
Blank:	±100ppm
R:	±25ppm
C:	±50ppm

Packaging	
Blank:	140pcs / Tube
T:	1,000pcs / reel
T3:	3,000pcs / reel
T5:	5,000pcs / reel
T10:	10,000pcs / reel

### Un-Programmed Orders (Quantity < 1,000pcs)

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	
EC:	± 50 ppm / -20°C to +70°C
ER:	± 25 ppm / -20°C to +70°C
LC:	± 50 ppm / -40°C to +85°C
LR:	± 25 ppm / -40°C to +85°C

Packaging	
Blank:	140pcs / Tube
T:	1,000pcs / reel
T3:	3,000pcs / reel
T5:	5,000pcs / reel
T10:	10,000pcs / reel



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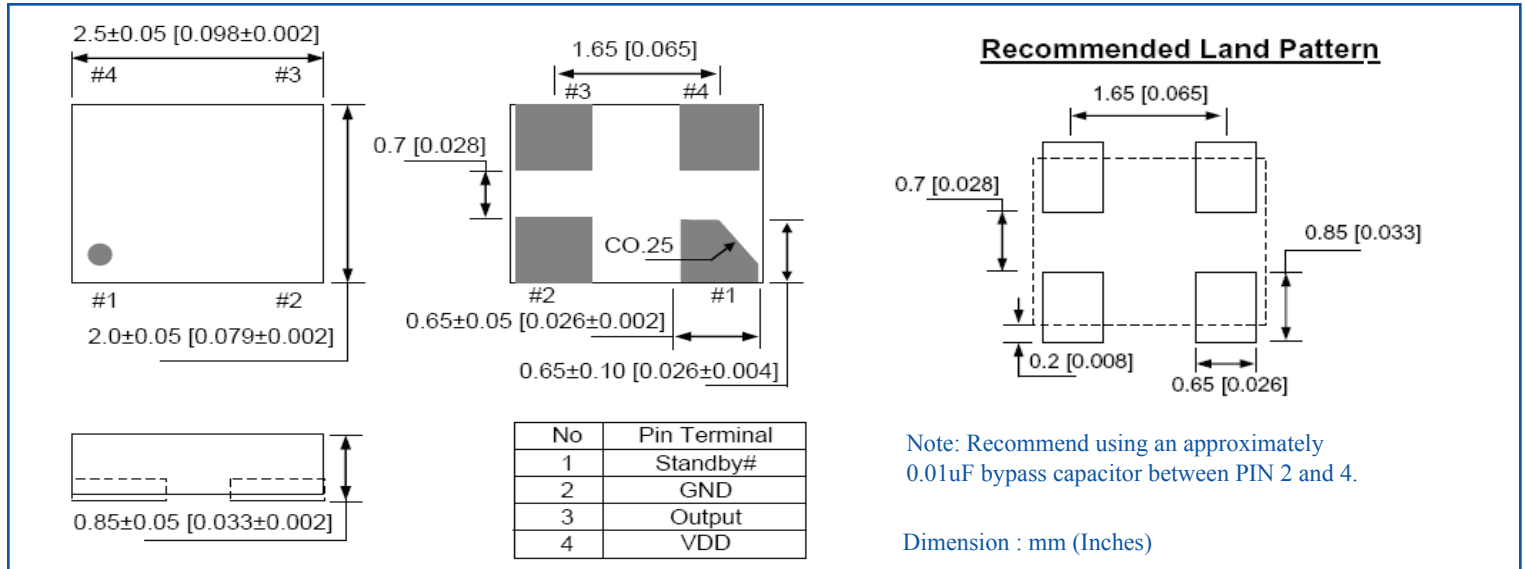
Life Size

2.5 x 2.0 x 0.80 mm

ASDM

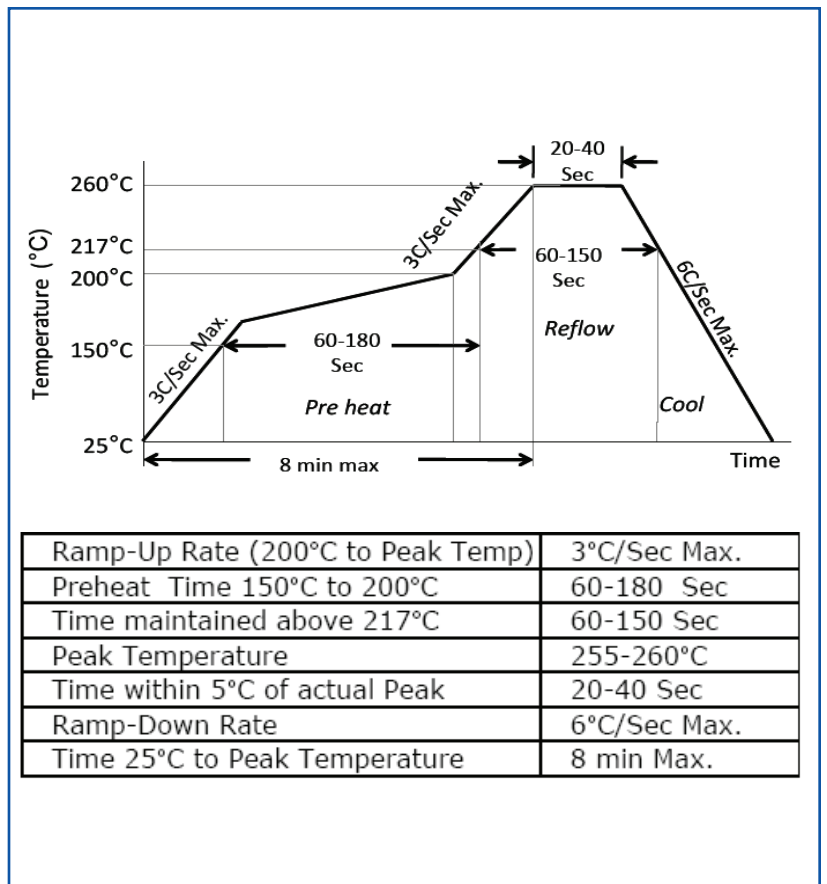
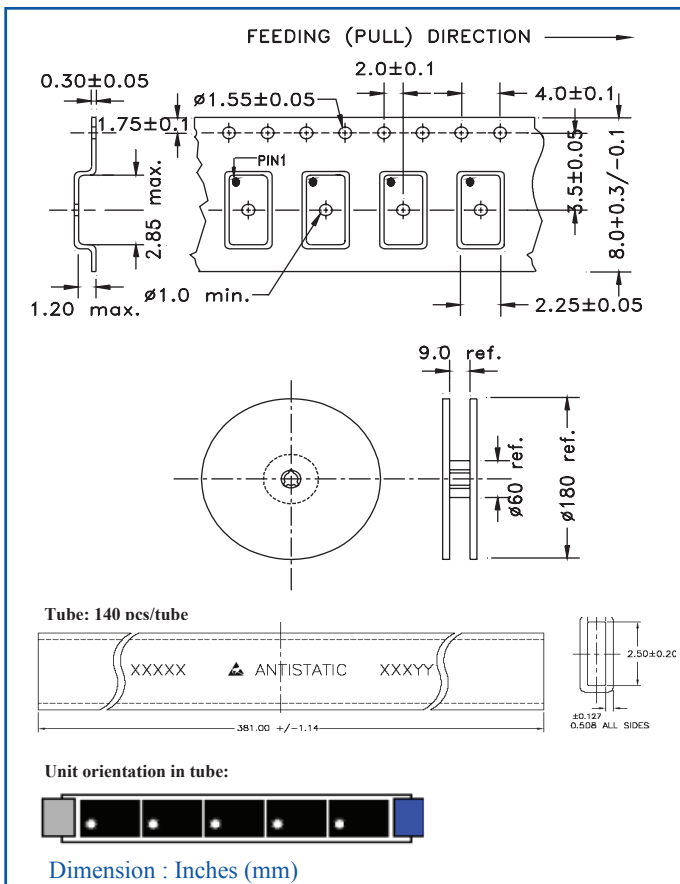


## OUTLINE DRAWING:



## 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](#).

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