

ULTRA MINIATURE PLASTIC PACKAGE PURE SILICON™ CLOCK OSCILLATOR

ASEM



ASEM



RoHS
Compliant

Life Size

3.2 x 2.5 x 0.85mm

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™
Clock Oscillator Programmer
AVAILABLE NOW!

STANDARD SPECIFICATIONS:

PARAMETERS

ABRACON P/N:	ASEM Series
Frequency range:	1.000 MHz - 150 MHz
Operating temperature:	0°C to + 70°C (see options)
Storage temperature:	-40°C to +155°C
Overall Frequency Stability:	± 100 ppm max. (see options)
Supply Voltage (Vdd):	3.3 V ± 0.3 V (see options)
Supply Current (No Load)	6.0mA max (1.0 to 39.9999MHz) 7.0mA max (40.0 to 79.9999MHz) 9.0mA max (80.0 to 125MHz) (T=-40 to +85°C, Vdd=3.3 ± 0.3V, 2.5 ± 0.2V, 1.8 ± 0.15V)
Supply Current: (Full Load)	9.0mA max (1.0 to 39.9999MHz) 10.0mA max (40.0 to 79.9999MHz) 16.0mA max (80.0 to 125MHz) (T=-40 to +85°C, Vdd=3.3 ± 0.3V, 2.5 ± 0.2V, 1.8 ± 0.15V CL=15pF, RL=10kΩ)
Symmetry	45/55 % max.@ 1/2Vdd
Rise and fall time (Tr/Tf)	5ns max. (+25°C, 15pF output load, 10/90% Vdd.)
Output load	15 pF max., 10kohms min.
Output voltage	VOH = 0.9* Vdd min. ; VOL = 0.1* Vdd max.
Input voltage	VIH = 0.9* Vdd min. ; VIL = 0.1* Vdd max.
Start-up time	10ms max.
Enable time	10ms max.
Disable time	100ns max.
Tri-State function (Stand-by)	"1" or open: Oscillation; "0" : No oscillation/Hi Z
Stand-by Current	1uA max. (T= +25°C, Vdd=3.0 ± 0.3V, 2.5 ± 0.2V, 1.8 ± 0.2V)
Aging at +25°C/year	± 5ppm max.
Jitter (reference only)	1MHz: 176ps ps typ.(RMS Jitter); 1.7ns typ.(Pk-Pk Jitter) 26MHz: 19ps typ.(RMS Jitter); 147ps typ.(Pk-Pk Jitter) 100MHz: 8ps typ.(RMS Jitter); 77ps typ.(Pk-Pk Jitter) 150MHz: 10ps typ.(RMS Jitter); 82ps typ.(Pk-Pk Jitter)

ABRACON IS
ISO 9001 / QS 9000
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 11.20.08**
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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OPTIONS AND PART IDENTIFICATION:

ASEM□□ - Frequency - □ - □ - □

Programmable		Supply Voltage		Frequency	Operating Temp.		Freq. Stability		Packaging	
Blank	Programmed	1	3.3 ± 0.3V (std)	XXX.XXX MHz	Blank	0°C to +70°C	Blank	± 100 ppm	Blank	Tube (114pcs/tube)
B**	Unprogrammed	3	2.5 ± 0.2V		M	-20°C to +85°C	C	± 50 ppm		
		4	1.8 ± 0.15V		L*	-40°C to +85°C			T	Tape and Reel (1000pcs/reel)

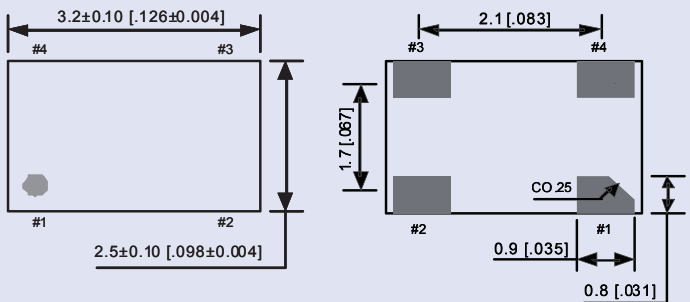
* Please contact Abracon for Temperature Option Availability.
** Blank un-programmed oscillators and our low cost portable programmer is available for quick turn engineering requirements. Please call or visit www.abracon.com for more information. Please contact Abracon for order assistance for high shock application.

MEMSPEED PRO™ Clock Oscillator Programmer

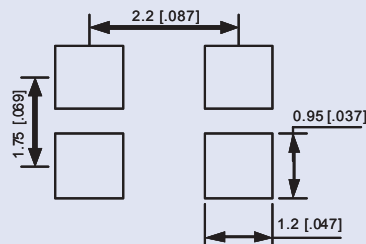
Our new MEMSpeed Pro Clock Oscillator Programmer allows you to program parts to any frequency between 1 and 150 Mhz in 1 second! Order online now at www.abracon.com.



OUTLINE DRAWING:



Recommended Land Pattern

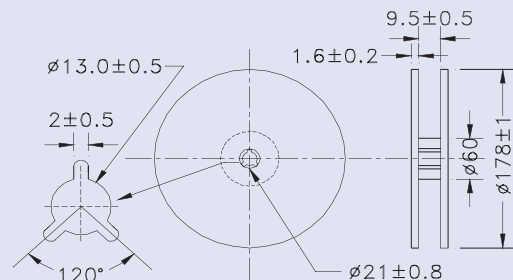
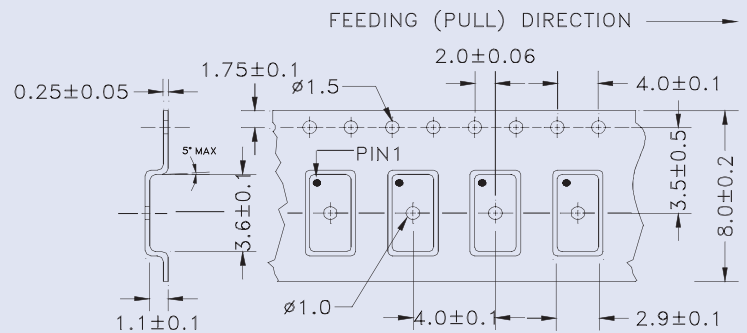


Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

No.	Pin terminal
1	Tri-state
2	Gnd
3	Output
4	V _{DD}

Dimensions: Inches (mm)

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



Dimensions: mm

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