

Plastic Package Industrial Grade Ultra Miniature Pure Silicon™ Clockoscillators, Layout Compatible To 1.6 X 1.2 Mm Standard Oscillator

ASCSM

Moisture Sensitivity Level – MSL 1



RoHS/RoHS II



1.8 x 1.25 x 0.68mm
Layout Compatible to 1.6 x 1.2 mm
Standard Oscillator

DISCONTINUED: Last Time Buy Date: December 20, 2013

FEATURES:

- Ultra Miniature Pure Silicon™ Clock Oscillator, Layout Compatible to 1.6 x 1.2 mm Footprint
- High Performance MEMS Technology by Discera
- Low Power Consumption for high speed communication
- Exceptional Stability Over Temp. at -40 to +105°C, ±10ppm
- Available in 30kG Shock Resistance Configuration upon request
- MIL-STD-883 shock and vibration compliant
- Ball Grid Array Packaging
- Low jitter (Period jitter RMS and Phase jitter RMS)

APPLICATIONS:

- Imaging, Video, and Audio Modules
- Portable Consumer Electronics and Media Devices
- Tablets and Mobile Internet Devices
- Low Profile Embedded Designs
- Pico and Femto Networking

STANDARD SPECIFICATIONS:

Common Key Electrical 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:	-50		+50	ppm	See options
Supply Voltage (Vdd):	+1.7 ~ +3.6			V	
Output Load:			15	pF	
	10			kΩ	
Symmetry:	45		55	%	@1/2Vdd
Startup Time:		1.0	1.3	ms	
Disable Time:		20	100	ns	
Disable Stand-by Current:			15	uA	
Tri-state Function (Stand-by) :	"1" (VIH≥0.75*Vdd) or Open: Oscillation "0" (VIL<0.25*Vdd) : Hi Z			V	
Aging:	-5.0		+5.0	ppm	First year

Key Electrical Specifications

Parameters	Minimum	Typical	Maximum	Units	Notes
Supply Current (no load):	12 MHz	6.0	6.5	mA	CL=0p ; V=1.8V RL=∞; T=25°C (Standard CL: 15pF)
Output Voltage:	V _{OH}	0.8*V _{dd}		V	CL=15pF
	V _{OL}		0.2*V _{dd}	V	
Rise Time:	Tr	1.8	3.0	ns	CL=15pF; T=25°C 20%/80%*VDD
Fall Time:	Tf	1.0	3.0	ns	
Period Jitter RMS	Jrms	7.0		ps	F=12MHz CL=15pF

Absolute Maximum Ratings

Item	Minimum	Maximum	Unit	Condition
Input Voltage	-0.3	V _{DD} +0.3	V	
Junction Temp.		+150	°C	
Storage Temp.	-55	+150	°C	
Soldering Temp.		+260	°C	40sec max
ESD			V	
HBM		4,000		
MM		200		
CDM		1,500		



Plastic Package Industrial Grade Ultra Miniature Pure Silicon™
Clockoscillators, Layout Compatible To 1.6 X 1.2 Mm Standard Oscillator

ASCSM



RoHS/RoHS II



1.8 x 1.25 x 0.68mm
Layout Compatible to 1.6 x 1.2 mm
Standard Oscillator

DISCONTINUED: Last Time Buy Date: December 20, 2013

PART IDENTIFICATION:

ASCSM - [] MHz - [] - []

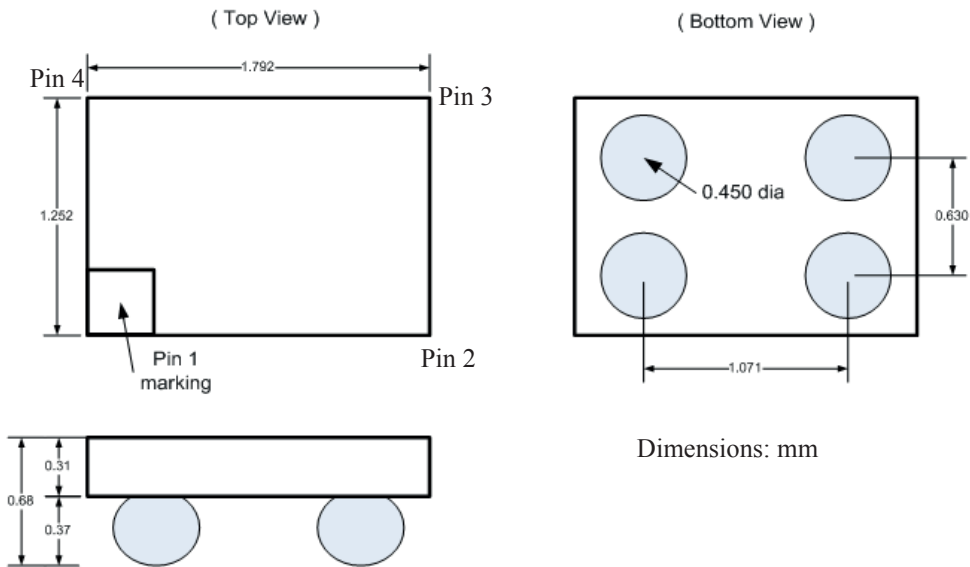
Frequency in MHz
e.g. 14.3181 MHz (Maximum 4 digits after decimal)

Operating Temp.
Blank: 0°C ~ +70°C
E: -20°C ~ +70°C
L: -40°C ~ +85°C
X: -40°C ~ +105°C

Overall Freq. Stability
C: ±50ppm (STD)
Y: ±10ppm
R: ±25 ppm

Packaging
Blank: Bulk
T: 2,500pcs/reel
T5: 5,000pcs / reel

OUTLINE DRAWING:

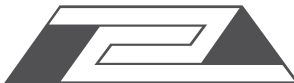
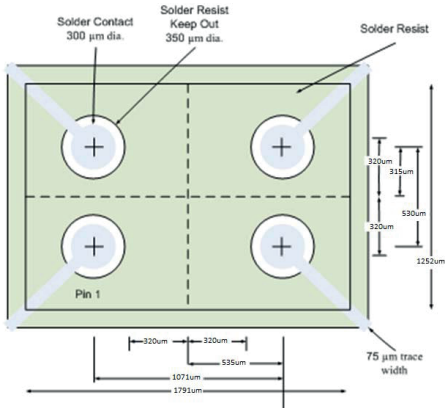


Component height after reflow is 0.53-0.60 mm. Layout Compatible to 1.6 x 1.2 mm Standard Oscillator

Pin	Function
1	Standby
2	GND
3	Output
4	Vdd

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

Recommended Land Pattern



Plastic Package Industrial Grade Ultra Miniature Pure Silicon™ Clockoscillators, Layout Compatible To 1.6 X 1.2 Mm Standard Oscillator

ASCSM



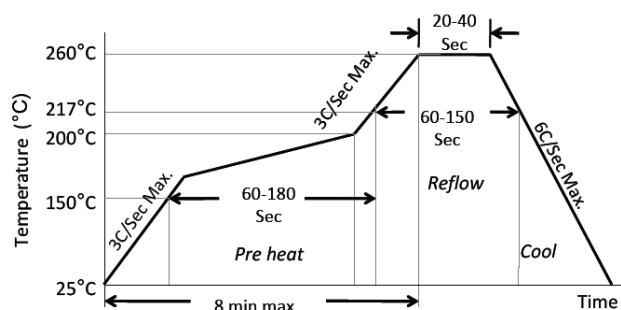
RoHS/RoHS II



1.8 x 1.25 x 0.68mm
Layout Compatible to 1.6 x 1.2 mm
Standard Oscillator

DISCONTINUED: Last Time Buy Date: December 20, 2013

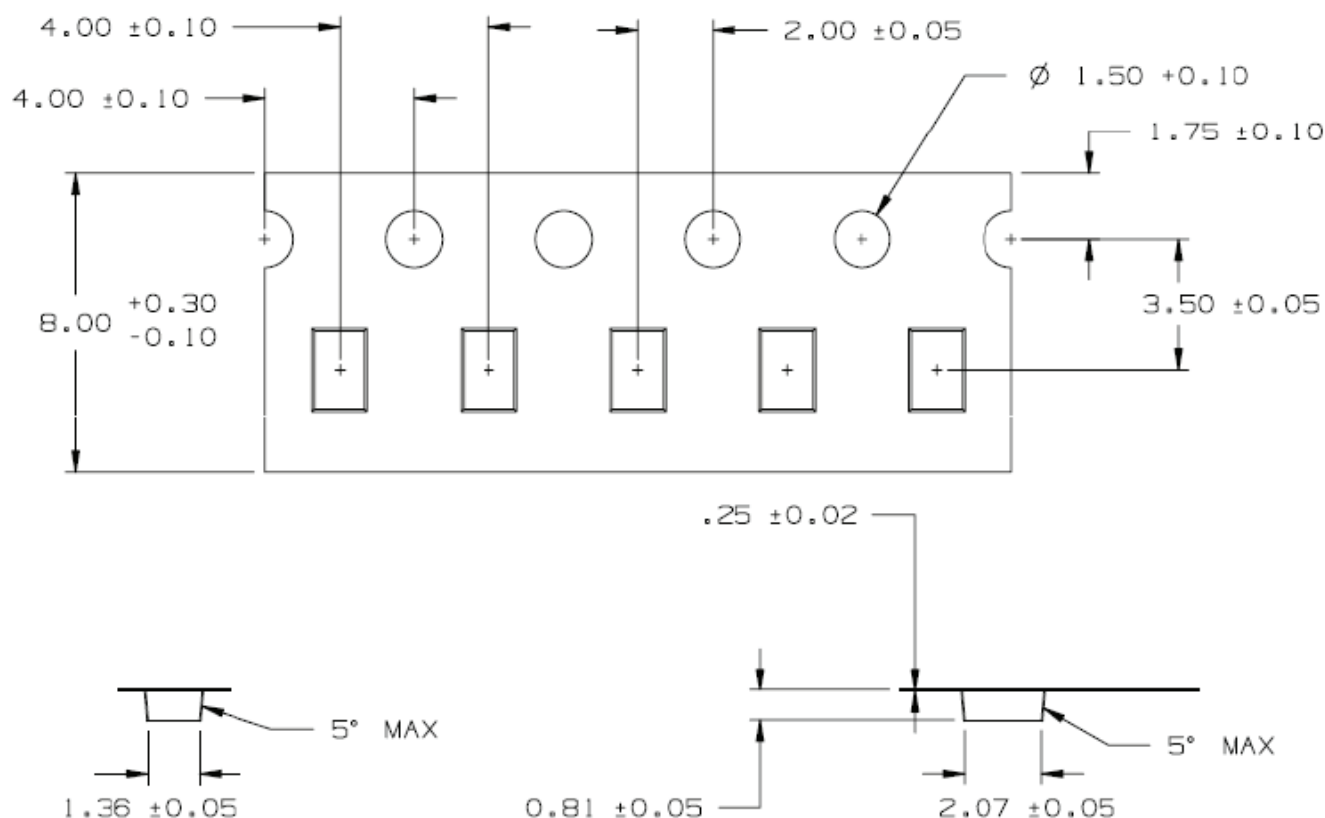
REFLOW PROFILE:



Ramp-Up Rate (200°C to Peak Temp)	3°C/Sec Max.
Preheat Time 150°C to 200°C	60-180 Sec
Time maintained above 217°C	60-150 Sec
Peak Temperature	255-260°C
Time within 5°C of actual Peak	20-40 Sec
Ramp-Down Rate	6°C/Sec Max.
Time 25°C to Peak Temperature	8 min Max.

TAPE & REEL:

T= 2,500pcs/reel
T5= 5,000pcs/reel
Reel Size: Ø13 inches



ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS
ISO 9001:2008
CERTIFIED



**ABRACON
CORPORATION**

Visit www.abracon.com for Terms & Conditions of Sale

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

Revised: 04.11.13

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ABRACON:

[ASCSM-11.2896MHZ-LR-T](#) [ASCSM-12.352MHZ-LY-T](#) [ASCSM-27.120MHZ-LR-T](#) [ASCSM-2.048MHZ-LR-T](#) [ASCSM-70.000MHZ-LR-T](#) [ASCSM-76.800MHZ-LR-T](#) [ASCSM-14.31818MHZ-LY-T](#) [ASCSM-150.000MHZ-LY-T](#) [ASCSM-44.000MHZ-LY-T](#) [ASCSM-20.000MHZ-LY-T](#) [ASCSM-7.3728MHZ-LY-T](#) [ASCSM-29.4912MHZ-LY-T](#) [ASCSM-65.000MHZ-LR-T](#) [ASCSM-150.000MHZ-LR-T](#) [ASCSM-70.000MHZ-LY-T](#) [ASCSM-11.0592MHZ-LY-T](#) [ASCSM-54.000MHZ-LR-T](#) [ASCSM-5.000MHZ-LR-T](#) [ASCSM-76.800MHZ-LY-T](#) [ASCSM-12.352MHZ-LR-T](#) [ASCSM-1.8432MHZ-LY-T](#) [ASCSM-12.500MHZ-LR-T](#) [ASCSM-3.6864MHZ-LR-T](#) [ASCSM-14.7456MHZ-LY-T](#) [ASCSM-72.000MHZ-LY-T](#) [ASCSM-48.000MHZ-LY-T](#) [ASCSM-32.768MHZ-LR-T](#) [ASCSM-26.000MHZ-LY-T](#) [ASCSM-80.000MHZ-LR-T](#) [ASCSM-25.000MHZ-LR-T](#) [ASCSM-2.000MHZ-LY-T](#) [ASCSM-60.000MHZ-LR-T](#) [ASCSM-60.000MHZ-LY-T](#) [ASCSM-18.432MHZ-LR-T](#) [ASCSM-80.000MHZ-LY-T](#) [ASCSM-14.7456MHZ-LR-T](#) [ASCSM-120.000MHZ-LR-T](#) [ASCSM-66.000MHZ-LY-T](#) [ASCSM-33.000MHZ-LY-T](#) [ASCSM-16.384MHZ-LY-T](#) [ASCSM-1.544MHZ-LR-T](#) [ASCSM-66.000MHZ-LR-T](#) [ASCSM-120.000MHZ-LY-T](#) [ASCSM-30.000MHZ-LY-T](#) [ASCSM-18.432MHZ-LY-T](#) [ASCSM-64.000MHZ-LY-T](#) [ASCSM-64.000MHZ-LR-T](#) [ASCSM-1.544MHZ-LY-T](#) [ASCSM-125.000MHZ-LR-T](#) [ASCSM-100.000MHZ-LR-T](#) [ASCSM-13.000MHZ-LR-T](#) [ASCSM-12.000MHZ-LY-T](#) [ASCSM-33.000MHZ-LR-T](#) [ASCSM-10.000MHZ-LY-T](#) [ASCSM-32.000MHZ-LY-T](#) [ASCSM-15.000MHZ-LY-T](#) [ASCSM-24.000MHZ-LR-T](#) [ASCSM-6.140MHZ-LR-T](#) [ASCSM-48.000MHZ-LR-T](#) [ASCSM-1.8432MHZ-LR-T](#) [ASCSM-15.000MHZ-LR-T](#) [ASCSM-29.4912MHZ-LR-T](#) [ASCSM-66.666MHZ-LY-T](#) [ASCSM-24.000MHZ-LY-T](#) [ASCSM-38.400MHZ-LR-T](#) [ASCSM-16.384MHZ-LR-T](#) [ASCSM-2.048MHZ-LY-T](#) [ASCSM-26.000MHZ-LR-T](#) [ASCSM-32.768MHZ-LY-T](#) [ASCSM-5.000MHZ-LY-T](#) [ASCSM-72.000MHZ-LR-T](#) [ASCSM-66.666MHZ-LR-T](#) [ASCSM-125.000MHZ-LY-T](#) [ASCSM-4.000MHZ-LY-T](#) [ASCSM-12.500MHZ-LY-T](#) [ASCSM-24.576MHZ-LR-T](#) [ASCSM-12.288MHZ-LY-T](#) [ASCSM-133.333MHZ-LR-T](#) [ASCSM-68.000MHZ-LY-T](#) [ASCSM-19.440MHZ-LR-T](#) [ASCSM-16.000MHZ-LY-T](#) [ASCSM-33.333MHZ-LR-T](#) [ASCSM-32.000MHZ-LR-T](#) [ASCSM-7.3728MHZ-LR-T](#) [ASCSM-1.000MHZ-LR-T](#) [ASCSM-75.000MHZ-LY-T](#) [ASCSM-2.000MHZ-LR-T](#) [ASCSM-11.0592MHZ-LR-T](#) [ASCSM-19.200MHZ-LR-T](#) [ASCSM-8.000MHZ-LR-T](#) [ASCSM-12.288MHZ-LR-T](#) [ASCSM-4.000MHZ-LR-T](#) [ASCSM-6.000MHZ-LY-T](#) [ASCSM-6.000MHZ-LR-T](#) [ASCSM-40.000MHZ-LR-T](#) [ASCSM-24.576MHZ-LY-T](#) [ASCSM-100.000MHZ-LY-T](#) [ASCSM-50.000MHZ-LR-T](#) [ASCSM-27.000MHZ-LY-T](#) [ASCSM-68.000MHZ-LR-T](#)