

# VOLTAGE CONTROLLED TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR



5.0 X 3.2 X 1.5mm

ASTX-09/ASVTX-09



## FEATURES:

- Low height 1.5mm
- Low phase noise -135dBc typical / 1kHz
- Low current 1.5mA / ~20MHz
- Clipped sine wave output.
- Suitable for RoHS reflow

## APPLICATIONS:

- Cellular and cordless phones.
- GPS
- Mobile communication equipment.
- Portable radio equipment and music player.

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ASTX-09/ASVTX-09 Series										
Frequency:	6.000MHz to 45.000MHz										
Nominal Frequencies:	8, 10, 12, 12.8, 13, 14.4, 16.368, 19.2, 19.8, 20, 22, 24.5535, 26.40										
Operating Temperature:	-30°C to +75°C (See Table 1 for options)										
Storage Temperature:	-40°C to +85°C										
Frequency Stability:	<table border="0"> <tr> <td>vs +25°C before reflow</td> <td>± 0.5ppm standard ( See option)</td> </tr> <tr> <td>vs Operating Temp.</td> <td>±2.5ppm standard (See Table1 for options)</td> </tr> <tr> <td>vs Aging</td> <td>± 1ppm/1st year</td> </tr> <tr> <td>vs Supply Voltage</td> <td>±0.2ppm (± 5% change)</td> </tr> <tr> <td>vs Load</td> <td>±0.2ppm (± 10% change)</td> </tr> </table>	vs +25°C before reflow	± 0.5ppm standard ( See option)	vs Operating Temp.	±2.5ppm standard (See Table1 for options)	vs Aging	± 1ppm/1st year	vs Supply Voltage	±0.2ppm (± 5% change)	vs Load	±0.2ppm (± 10% change)
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vs Operating Temp.	±2.5ppm standard (See Table1 for options)										
vs Aging	± 1ppm/1st year										
vs Supply Voltage	±0.2ppm (± 5% change)										
vs Load	±0.2ppm (± 10% change)										
Voltage Control Range (Vcc):	1.5V ±1.0V										
Supply Voltage (Vdd):	3.0V ± 5%Standard (See options)										
Supply Current:	1.5mA max (~20MHz), 2.0mA max (~32MHz), 2.5mA max (~45MHz)										
Output Type:	Clipped Sine										
Output Voltage	0.8Vp-p min										
Output Load:	10 kohm // 10 pF										
Pullability:	± 8ppm min										
Transfer function:	Positive										
Phase Noise (Reference only):	-135dBc typical @ 1KHz (Frequency dependent.) e.g. -131dBc typical @ 1KHz (32MHz), Please contact ABRACON for each frequencies.										

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASTX- 09/ASVTX - 09 - □ - Frequency - □ - □□□ - □

	Supply Voltage (Vdd)
A	2.5V±0.1 V
Blank*	3.0V±5%
B	3.3V±5%
C	5.0V±5%

\*3.0V±5% : Standard

Frequency Stability vs +25°C	
Blank*	±0.5ppm
J	±1.5ppm

\* Standard

Packaging	
Blank	Bulk
T	Tape and Reel

(1,000 or 2,000pcs/reel)

Table 1: Frequency Stability vs Operating Temp.

	±1ppm	±1.5ppm	±2ppm	±2.5ppm	±3ppm	±4ppm	±5ppm
0°C-50°C	D10	D15	D20	D25	D30	D40	D50
-10°C to 60°C	E10	E15	E20	E25	E30	E40	E50
0°C to 70°C		F15	F20	F25	F30	F40	F50
-20°C to +75°C			G20	G25	G30	G40	G50
-30°C to 75°C				STD	H30	H40	H50
-40°C to 85°C					I30	I40	I50

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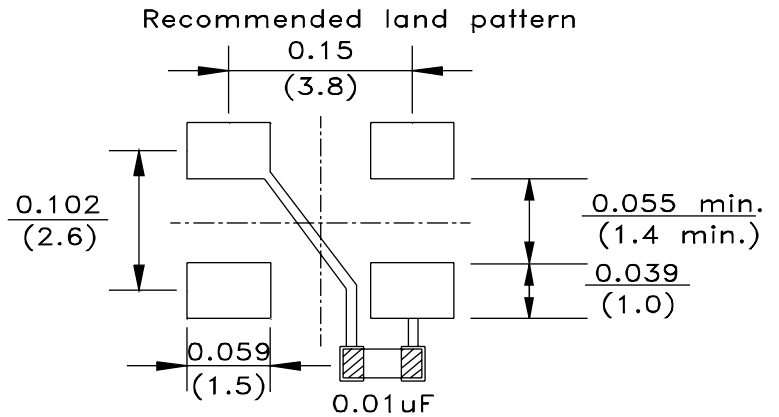
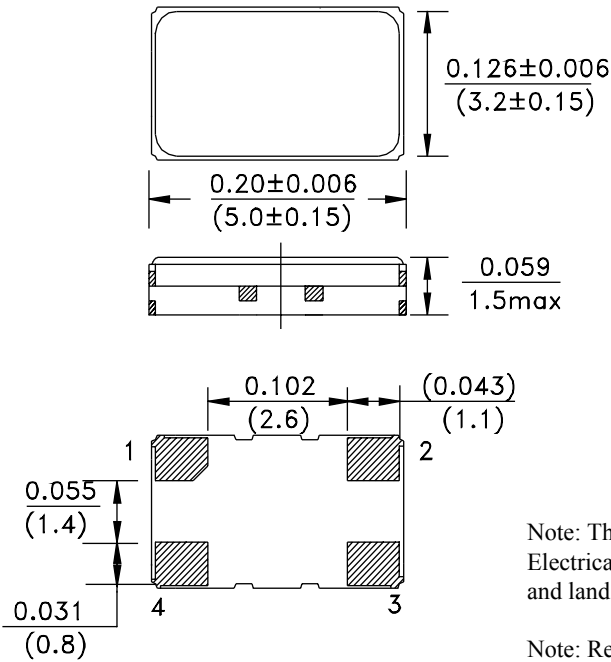


5.0 X 3.2 X 1.5mm

ASTX-09/ASVTX-09



## OUTLINE DIMENSIONS:



Note: The outline package may vary. Electrical properties, pin configuration, and land pattern are the same.

Note: Recommend using an approximately  $0.01 \mu F$  bypass capacitor between PIN 2 and 4.

PIN	FUNCTION
1	Vc/NC*
2	GND
3	Output
4	Vdd

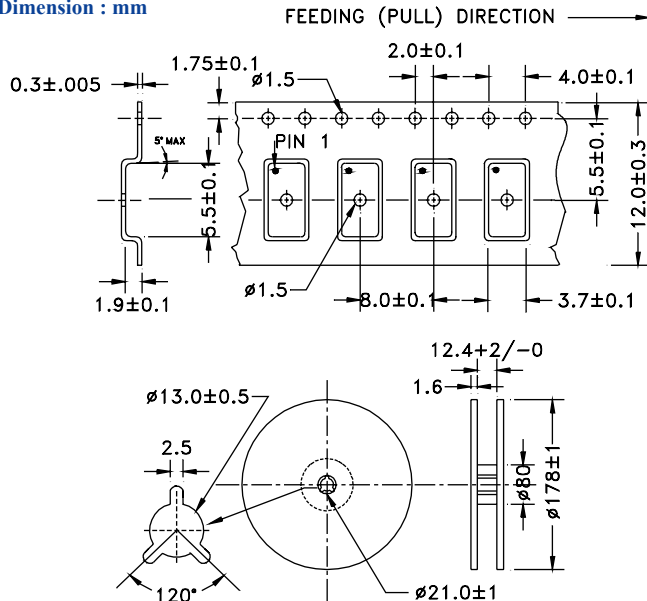
\*NC for ASTX-09 only

Dimension : Inches (mm)

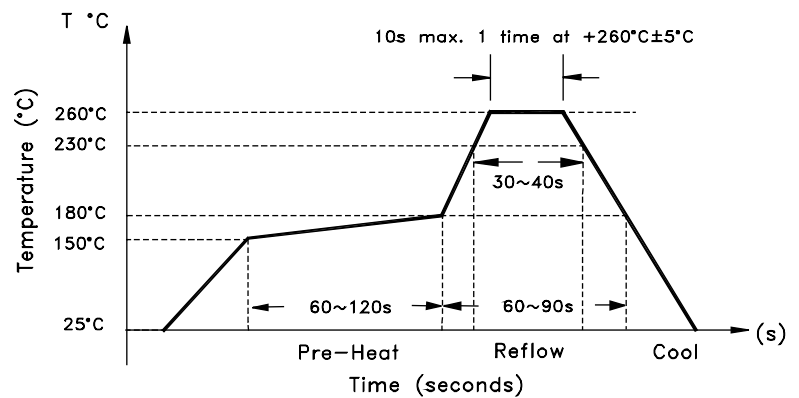
## TAPE & REEL:

T= tape and reel (1,000 or 2,000pcs/reel)

Dimension : mm



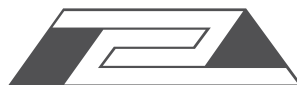
## REFLOW PROFILE:



Need a test socket for the ASTX-09/ASVTX-09 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#).

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