

# VOLTAGE CONTROLLED TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

ASTX-09/ASVTX-09



RoHS  
Compliant



5.0 X 3.2 X 1.5 mm

## 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: vs +25°C before reflow vs Operating Temp. vs Aging vs Supply Voltage vs Load	$\pm 0.5$ ppm standard ( See option) $\pm 2.5$ ppm standard (See Table1 for options) $\pm 1$ ppm/1st year $\pm 0.2$ ppm ( $\pm 5\%$ change) $\pm 0.2$ ppm ( $\pm 10\%$ change)
Voltage Control Range (Vcc):	1.5V $\pm$ 1.0V
Supply Voltage (Vdd):	3.0V $\pm 5\%$ 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:	$\pm 8$ ppm 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 $\pm$ 0.1 V
Blank*	3.0V $\pm$ 5%
B	3.3V $\pm$ 5%
C	5.0V $\pm$ 5%

\*3.0V $\pm$ 5% : Standard

Frequency Stability vs +25°C	
Blank*	$\pm 0.5$ ppm
J	$\pm 1.5$ ppm

\* Standard

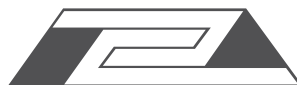
Packaging	
Blank	Bulk
T	Tape and Reel

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

Table 1: Frequency Stability vs Operating Temp.

	$\pm 1$ ppm	$\pm 1.5$ ppm	$\pm 2$ ppm	$\pm 2.5$ ppm	$\pm 3$ ppm	$\pm 4$ ppm	$\pm 5$ ppm
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

ABRACON IS  
ISO9001:2008  
CERTIFIED



ABRACON  
CORPORATION

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale

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