

# 32.768KHz VOLTAGE CONTROLLED TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

ASVTX-H08K

\* RoHS COMPLIANT



7.0 x 5.0 x 2.5mm

## FEATURES:

- Compact and low in height.
- 0.01uF decoupling capacitor built-in
- Wide frequency range; frequency stability

## APPLICATIONS:

- Test Equipment
- Cellular Base Station & GPS Navigation System
- Mobile communication equipment.

## STANDARD SPECIFICATIONS:

PARAMETERS	
Frequency Range	32.768KHz
Operating Temperature	- 30° C to + 75° C (See Table 1 for options)
Storage Temperature	- 50° C to + 100° C
Frequency Tolerance @ 25°C	± 3.0 ppm
Frequency Stability vs. Temp.	± 2.5 ppm standard (See Table 1 for options)
Frequency Stability vs. Aging	± 1 ppm / 1st year
Frequency Stability vs. Supply Voltage	± 0.3 ppm (±5% change)
Frequency Stability vs. Load ±10%	± 0.3 ppm (±10% change)
Frequency Stability vs. Reflow	± 1 ppm max. 1 reflow and measured 24 hours afterwards
Supply Voltage	3.0V Standard (See Table 2 for options)
Pullability	± 5ppm ~ 12ppm with Vcon = +1.5V ± 1.0V(see note)
Output Voltage Level	3.0V : "Logic 1" 2.7V min, "Logic 2" 0.3V max.
Output Load	15pF
Linearity	10% max
Transfer Function	Positive
Phase Noise @ 25°C	-65dBc/Hz @ 10Hz offset.
	-100dBc/Hz @ 100Hz offset
	-130dBc/Hz @ 1KHz offset
	-150dBc/Hz @ 10KHz offset
	-150dBc/Hz @ 100kHz offset
Current Consumption	3.5mA typ @ +3.3V / 7mA typ. @ +5.0V
Rise and Fall Time	20% to 80% waveform: 3nS typ.
Duty Cycle (Symmetry)	40/60%max @ 1/2V <sub>DD</sub> (see option)
Start-up Time	2msec typ.
Output Wave Form	HCMOS

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## MARKING:

- TUH  
AH08K ZYX

### Note 1:

TUH : Frequency  
T = First " ten " digit of frequency  
U = First " unit " of frequency  
H = First " tenth " of frequency  
Example: 100 for 10.0 MHz  
143 for 14.31818 MHz

ZY : Date Code  
Z = Month (A to L)  
Y = Year (6 for 2006)  
X = Traceability

## OPTIONS & PART IDENTIFICATION:

ASVTX-H08K - 32.768KHz - Voltage - Temperature & Freq Stability - Symmetry - Packaging

### Voltage option:

Blank for 3.0V  
A for 2.8V  
B for 3.3V  
C for 5V

### Temp & Stability option:

See Table 1

### Symmetry option:

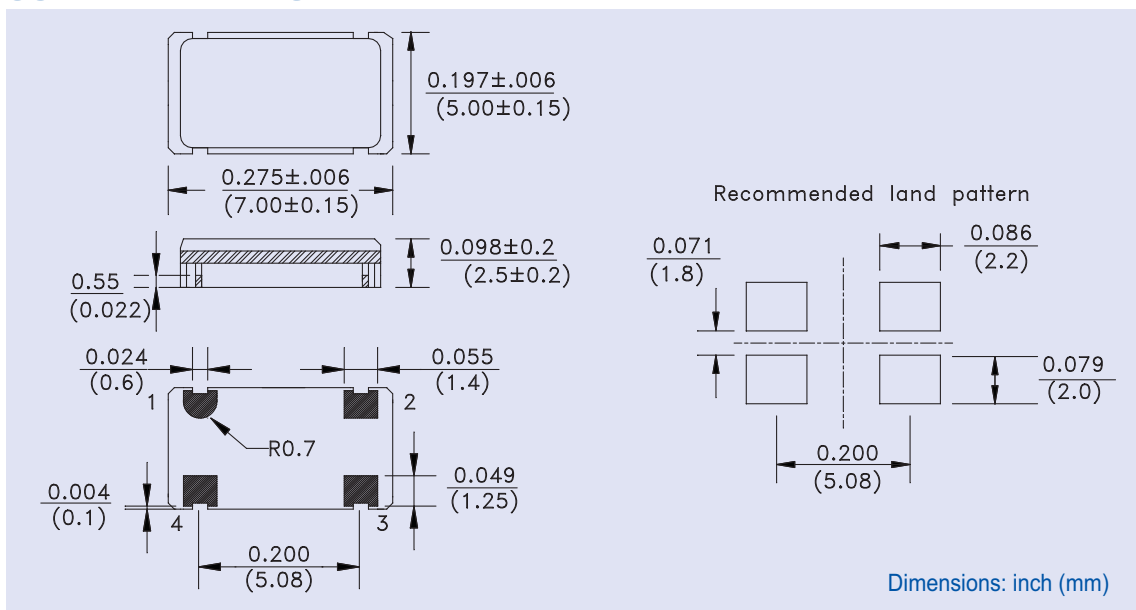
S for 45/55% @1/2Vdd

### Packaging option:

T for Tape and Reel

**Note:** +2.8V, +3.0V, +3.3V and +5.0V units all have Vcon= +1.5V±1.0V

## OUTLINE DRAWING:



PIN NO.	CONNECTIONS
1	Vc
2	Ground
3	Output
4	VCC

## TABLE 1:

	±1ppm	±1.5ppm	±2.0ppm	±2.5ppm
-10°C to 60°C	D10	D15	D20	D25
-20°C to +70°C	E10	E15	E20	E25
-30°C to 75°C	F10	F15	F20	<b>F25</b>
-40°C to 85°C		G15	G20	G25

< Standard