

VOLTAGE CONTROLLED CRYSTAL OSCILLATOR

ASVTX-H08



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	2.5MHz ~ 170.0MHz
Standard Frequencies	10.0MHz, 12.8MHz, 13.0MHz, 14.4MHz, 16.0MHz, 16.384MHz, 19.2MHz, 19.440MHz, 19.680MHz, 20.0MHz, 38.880MHz, 77.760MHz, 155.520MHz
Operating Temperature	- 30° C to + 75° C
Storage Temperature	- 50° C to + 100° C
Frequency Tolerance @ 25°C	± 2.0 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
Voltage Control Range	± 1.5V ± 1.0V ppm
Supply Voltage	3.0V Standard (See Table 2 for options)
Pullability	± 5ppm ~ 12ppm (Note 2)
Output Type	Square Wave
Output Voltage	“Logic 1” 2.4V min, “Logic 0” 0.4 min.
Output Load	15pF
Linearity	10% max
Transfer Function	Positive
Phase Noise @ 25°C	-72dBc/Hz @ 10Hz offset.
	-110dBc/Hz @ 100Hz offset
	-125dBc/Hz @ 1KHz offset
	-132dBc/Hz @ 10KHz offset
	-125dBc/Hz @ 100kHz offset
Rise and Fall Time	20%<-> 80%: 10nS max.
Duty Cycle (Symmetry)	@ 50%V _{DD} : 50%±10%
Start-up Time	10mS max.
Output Format	AC Block, DC Coupled

7.0 x 5.0 x 2.5mm

- TUH (Frequency)
AH08 ZYX (ZY: Date Code; Z = month A to L;
Y = Year, i.e. 4 for 2004, X = Tracability)

PIN NO.	CONNECTIONS
1	V _c
2	GND
3	Output
4	VCC

ASVTX-H08 - X - Frequency - Temperature & Freq Stability - Packaging

-T Tape and Reel (1,000pcs/reel)

Technical drawing of a 1.5mm pitch BGA package showing top, side, and bottom views with dimensions in inches and millimeters.

Top View Dimensions:

- Overall width: 0.197 ± 0.006 (5.00 ± 0.15)
- Overall length: 0.275 ± 0.006 (7.00 ± 0.15)

Side View Dimensions:

- Package height: 0.098 ± 0.2 (2.5 ± 0.2)
- Lead height: 0.55 (0.022)

Bottom View Dimensions:

- Pin pitch (center-to-center): 0.200 (5.08)
- Pin width: 0.049 (1.25)
- Pin spacing (center-to-lead): 0.055 (1.4)
- Lead width: 0.024 (0.6)
- Lead thickness: 0.004 (0.1)
- Radius: R0.7

Recommended land pattern:

- Land width: 0.086 (2.2)
- Land spacing (center-to-center): 0.071 (1.8)
- Land thickness: 0.079 (2.0)
- Land pitch (center-to-center): 0.200 (5.08)

Dimensions: inch (mm)

	±0.5ppm	±1ppm	±1.5ppm	±2.0ppm	±2.5ppm
0°C-50°C	D 5	D 10	D 15	D 20	D 25
-10°C to 60°C	E5	E 10	E 15	E 20	E 25
-20°C to +70°C		F10	F15	F20	F25
-30°C to 75°C		G10	G15	G20	G25
-40°C to 85°C		H10	H15	H20	H25

Letter Code	V _{DD}	Current Consumption (typical)
A	2.8V	2mA @ 8.192MHz, 3mA @ 10MHz, 14mA @ 77.760 MHz, 16mA @ 155.520MHz
STD	3V	2mA @ 8.192MHz, 4mA @ 10MHz, 17mA @ 77.760 MHz, 21mA @ 155.520MHz
B	3.3V	2mA @ 8.192MHz, 4mA @ 10MHz, 17mA @ 77.760 MHz, 21mA @ 155.520MHz
C	5V	5mA @ 8.192MHz, 7mA @ 10MHz, 32mA @ 77.760 MHz, 43mA @ 155.520MHz