

# HCMOS TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR



5.0 x 3.2 x 1.2mm

ASTX-H09



## FEATURES:

- Compact and low in height
- Low current consumption; IR reflow possible
- Suitable for high-density SMT
- HCMOS Output

## APPLICATIONS:

- Cellular and cordless phones
- Standard OSC for exact equipment
- Mobile communication equipment
- Portable radio equipment and music player

## STANDARD SPECIFICATIONS:

| PARAMETERS                        |   |
|-----------------------------------|---|
| ABRACON P/N                       | ASTX-H09  |
| Frequency                         | 5.000MHz to 50.000MHz   |
| Standard Frequencies              | 12.8, 13.0, 14.4, 15.36, 16.000, 16.384, 16.8, 19.2, 19.440, 19.680, 19.8, 26.0, 39.0, 48.0 MHz |
| Operating Temperature             | 0° C to + 70° C (See Table 1 for options)   |
| Storage Temperature               | - 40° C to + 85° C  |
| Freq. Stability vs. Room Temp.    | ±3.0ppm (1 hour after reflow at V <sub>cc</sub> =3.3V)  |
| vs. Operating Temp.               | ±3.0ppm standard (See Table1 for options)   |
| vs. Aging                         | ±2.0ppm/1st year  |
| vs. Supply Voltage                | ±0.5ppm (V <sub>cc</sub> ± 5% change)   |
| vs. Load                          | ±0.2ppm (± 10% change)  |
| Supply Voltage (V <sub>dd</sub> ) | 3.0 V Standard (See options)  |
| Supply Current                    | 15mA max  |
| Output Type                       | HCMOS   |
| Output Voltage (V <sub>OH</sub> ) | >2.97V  |
| Output Voltage (V <sub>OL</sub> ) | <0.33V  |
| Rise and Fall Time (Tr/Tf)        | 6nsec   |
| Output Load                       | 15 pF   |
| Phase Noise                       | -140dBc/Hz typical @ 100kHz offset; -125dBc/Hz typical @ 1kHz offset                            |
| Symmetry                          | 40/60 % @ 50% V <sub>dd</sub>   |
| Start-up Time                     | 10msec  |

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASTX - H09 - □ - Frequency - □□□ - □

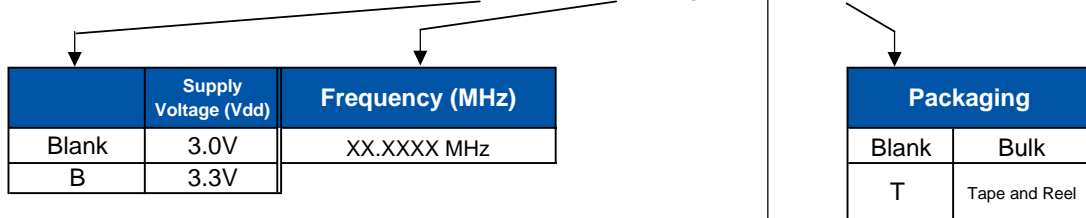


Table 1: Frequency Stability vs Operating Temp.

|                | ±2.5ppm | ±3ppm      | ±4ppm | ±5ppm |
|----------------|---------|------------|-------|-------|
| 0°C-50°C       | D25     | D30        | D40   | D50   |
| -10°C to 60°C  | E25     | E30        | E40   | E50   |
| 0°C to 70°C    | F25     | Blank(STD) | F40   | F50   |
| -20°C to +75°C |         | G30        | G40   | G50   |
| -30°C to 75°C  |         |            | H40   | H50   |
| -40°C to 85°C  |         |            | I40   | I50   |

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

# SMD TEMPERATURE COMPENSATED OSCILLATOR



ASTX-H09

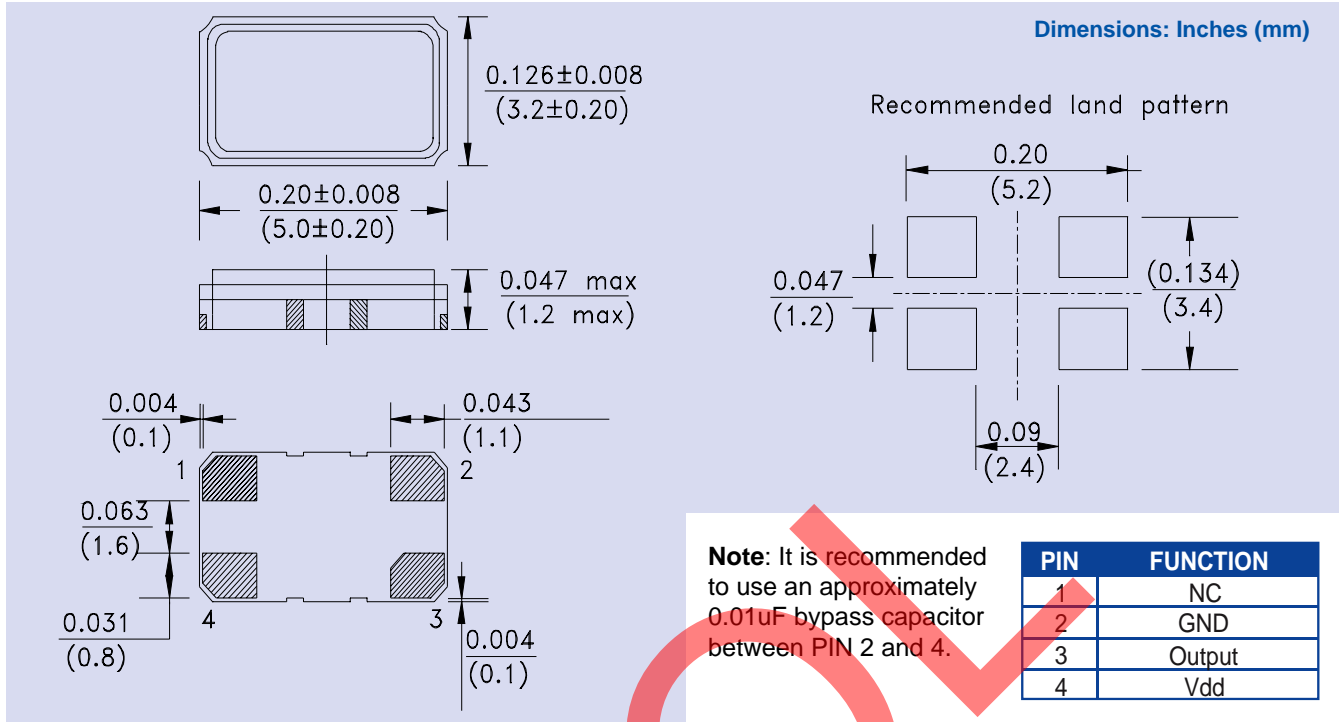
5.0 x 3.2 x 1.2mm

ASTX-H09

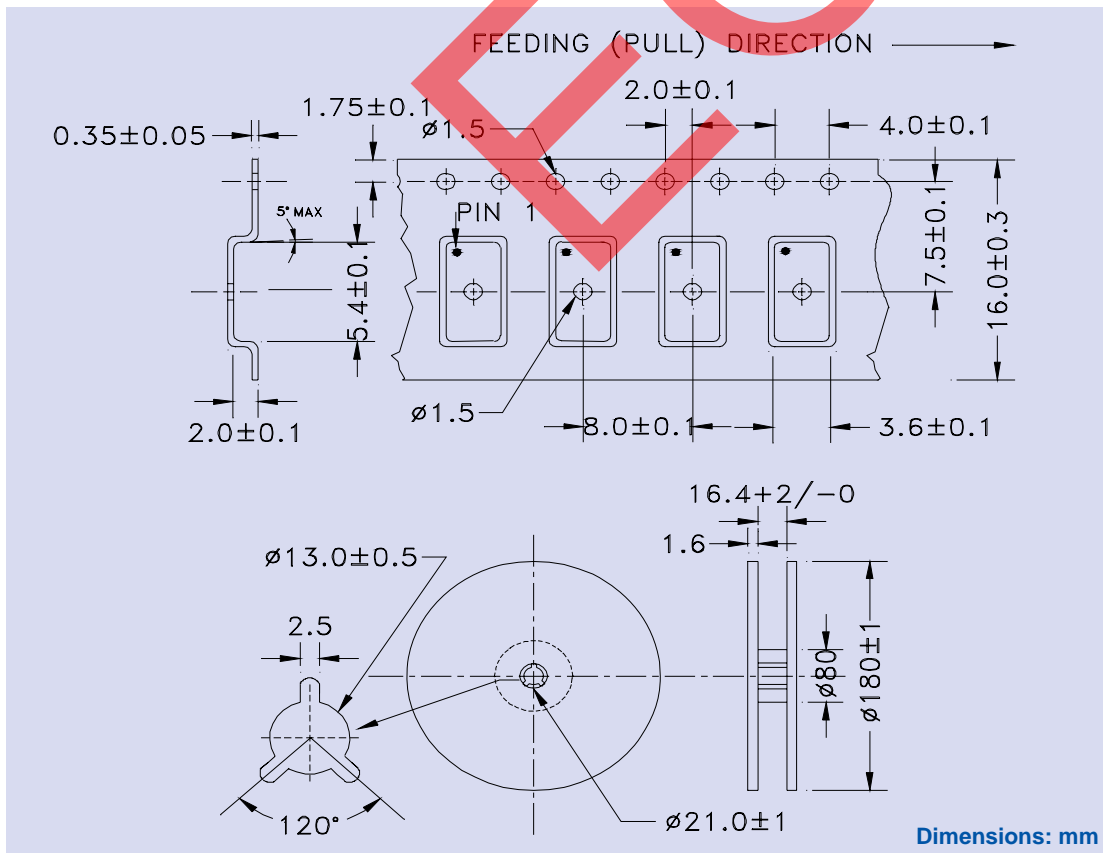


RoHS  
Compliant

## OUTLINE DRAWING:



## TAPE & REEL:



ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED



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