

# CERAMIC SMD CRYSTAL CLOCK OSCILLATOR WITH VOLTAGE CONTROL



7.0 x 5.08 x 1.8mm

## ASPE SERIES

### FEATURES:

- Complimentary PECL Outputs
- Compact and low in height
- Tri state function
- 2.5Vdc Supply Voltage Option
- Suitable for high density SMT., Reflow capable
- Tight stability option

### APPLICATIONS:

- Telecommunications Equipment
- High speed switching devices
- Routing devices

### STANDARD SPECIFICATIONS:

| PARAMETERS                  |  |
|-----------------------------|--|
| Frequency Range             | 1.544 MHz to 700 MHz   |
| Operating Temperature       | 0°C to + 70°C  |
| Storage Temperature         | - 55°C to + 125°C  |
| Overall Frequency Stability | ± 100 ppm max.   |
| Supply Voltage (Vdd)        | 3.3 Vdc ± 5%   |
| Input Current               | 80mA (for Fo < 160MHz), 120mA (for Fo > 160MHz)  |
| Symmetry                    | 40/60 % max. (see options)   |
| Rise and Fall Time (Tr/Tf)  | 400pS max  |
| Output Load                 | 50 Ω   |
| Output Type                 | PECL   |
| Output Voltage              | VOH = 2.35V Typ (3.3Vdd), 1.55V Typ (2.5Vdd)<br>VOL = 1.6V Typ (3.3Vdd), 0.8V Typ (2.5Vdd) |
| Pullability                 | ± 70 ppm min. (see options)  |
| Start-up Time               | 10mS max   |
| Tristate Function           | "1" (VIH ≥ 0.7* Vdd) or open: Oscillation<br>"0" (VIL < 0.3* Vdd) : No oscillation/Hi Z    |
| Jitter (12KHz - 20MHz)      | 3.5pS RMS max  |

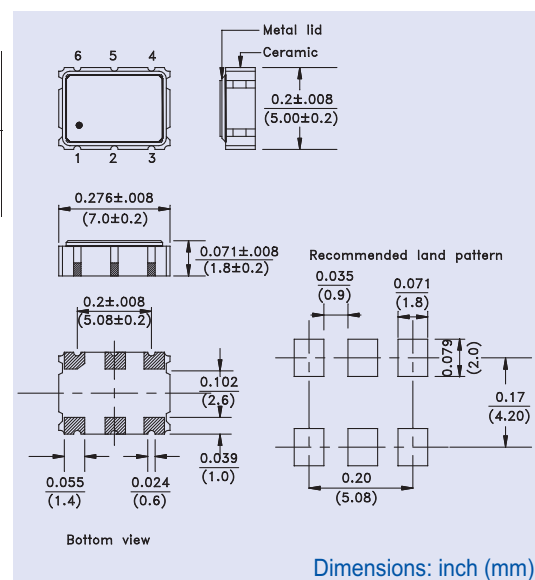
| PIN | FUNCTION        |
|-----|-----------------|
| 1   | Voltage Control |
| 2   | Tri-state       |
| 3   | GND/Case        |
| 4   | Output          |
| 5   | Output          |
| 6   | Vdd             |

Note: Decoupling capacitor shall be connected between Vdd and GND for best performance and stability.

### MARKING:

- XX.XXX (Frequency)
- ASPE ZYX (Z: month A to L; Y: year 0 for 2000, 1 for 2001  
X: Traceability code)

### OUTLINE DRAWING:



### OPTIONS AND PART IDENTIFICATION (Left blank if standard):

ASPE - Supply Voltage - Frequency - Temperature - Frequency Stability - Pullability - Symmetry - Packaging

#### Supply Voltage options:

- V for 3.3V±5%
- 2 for 2.5V±5%

#### Temperature options:

- D for -10°C to +60°C
- L for -40°C to +70°C

#### Symmetry option:

- S for 45/55% at 1/2Vdd

#### Stability options:

- R for ± 25 ppm
- K for ± 30 ppm
- H for ± 35 ppm
- C for ± 50 ppm

#### Pullability option:

- N100 for ±100 ppm min

#### Packaging option:

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