

# HCMOS/TTL COMPATIBLE VOLTAGE CONTROL CRYSTAL OSCILLATOR

ASV/ASV1 SERIES

\* RoHS COMPLIANT



7.0 x 5.08 x 1.8mm

## FEATURES:

- Leadless chip carrier (LCC), Low profile.
- HCMOS/TTL Compatible, 3.3Vdc, 2.5Vdc, & 1.8Vdc operation.
- Seam welding, Reflow capable.
- Seam welding, 1.4 max. height (ASV1)

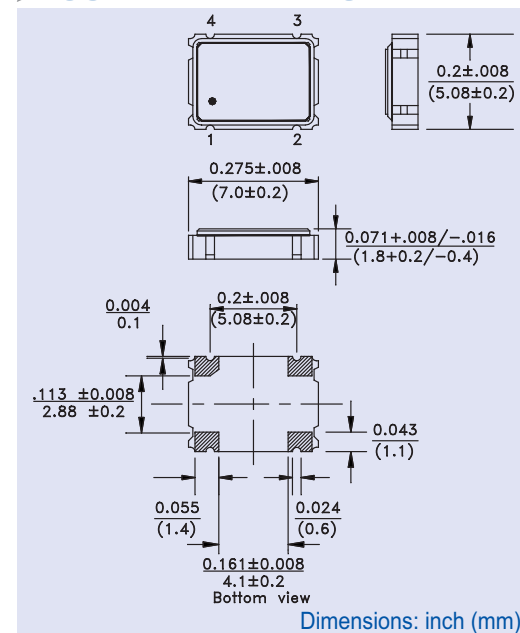
## APPLICATIONS:

- Provide clock signals for microprocessors, PC mainboards, Graphic cards.
- High output drive capability applications.

## STANDARD SPECIFICATIONS:

| PARAMETERS                   |                                                                         |
|------------------------------|-------------------------------------------------------------------------|
| Frequency Range:             | 1.000 MHz to 150 MHz                                                    |
| Operating Temperature:       | -10° C to + 70° C (see options)                                         |
| Storage Temperature:         | - 55° C to + 125° C                                                     |
| Overall Frequency Stability: | ± 100 ppm max. (see options)                                            |
| Supply Voltage (Vdd):        | 3.3 Vdc ± 10% (see options)                                             |
| Input Current:               | See Table 1                                                             |
| Symmetry:                    | 40/60 % max.@ 1/2Vdd (see options)                                      |
| Rise And Fall Time (Tr/tf):  | See Table 1                                                             |
| Output Load:                 | 15 pF (5TTL)                                                            |
| Output Voltage:              | VOH = 0.9 * Vdd min.<br>VOL = 0.4 Vdc max.                              |
| Start-up Time:               | 10ms max.                                                               |
| Tristate Function :          | "1" (VIH >= 2.2 Vdc) or open: Oscillation<br>"0" (VIL < 0.8 Vdc) : Hi Z |
| Aging At 25°c/year :         | ± 5ppm max.                                                             |
| Period Jitter One Sigma :    | ± 25ps max.                                                             |
| Disable Current:             | 15µA max.                                                               |

## OUTLINE DRAWING:



## MARKING:

- XX.X RS (see note)
- ASV ZYW (see note)

### Alternate Marking:

Marking scheme subject to change without notice.  
Contact factory for Alternate Marking Specifications.

## NOTE:

XX.X First 3 digits of freq.  
ex: 66.6 or 100  
R Freq. Stability option (\*)  
S Duty cycle option (\*)  
L Temperature option (\*)  
Z month A to L  
Y year 6 for 2006  
W traceability code (A to Z)

| PIN | FUNCTION  |
|-----|-----------|
| 1   | Tri-state |
| 2   | GND/Case  |
| 3   | Output    |
| 4   | Vdd       |

Table 1

| Freq. (MHz) | Idd max. (mA) | Tr/Tf max. (nSec) |
|-------------|---------------|-------------------|
| 1.0 ~ 34.99 | 16            | 10ns              |
| 35.0 ~ 60.0 | 25            | 5ns               |
| 60.01~99.99 | 40            | 5ns               |
| 100 ~ 150   | 50            | 2.5ns             |

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

ASV - Voltage - Frequency - Temp. - Overall Frequency Stability - Duty cycle - Packaging

### Freq Stability options:

Y for ± 10 ppm max.  
J for ± 20 ppm max.  
R for ± 25 ppm max.  
K for ± 30 ppm max.  
H for ± 35 ppm max.  
C for ± 50 ppm max.

### Temperature options:

I for 0°C to +50°C  
D for -10°C to +60°C  
E for -20°C to +70°C  
F for -30°C to +70°C  
N for -30°C to +85°C  
L for -40°C to +85°C

### Voltage options:

25 for 2.5V  
18 for 1.8V

### Symmetry option:

S for 45/55% at 1/2Vdd  
S1 for 45/55% at 1.4Vdc

### Packaging option:

T for Tape and Reel (1,000pcs/reel)  
T5 for Tape and Reel (500pcs/reel)