

7.0 x 5.0 x 1.7 mm

MINIATURE CERAMIC • HCMOS • SURFACE MOUNT • 5Vdc or 3.3Vdc VOLTAGE-CONTROLLED CRYSTAL OSCILLATORS ASLV and ASVV Series

FEATURES:

- Low profile (1.7 mm) ceramic VCXO.
- Enable / Disable functions.
- 7.0 mm x 5.0 mm seam welded.
- 5Vdc or 3.3Vdc.
- Suitable for reflow methods.
- HCMOS/TTL output.

APPLICATIONS:

- Phase locked loops (PLLs).
- Synthesizers.
- Clock Recover, Digital transmission device.
- Digital set-top box.

STANDARD SPECIFICATIONS

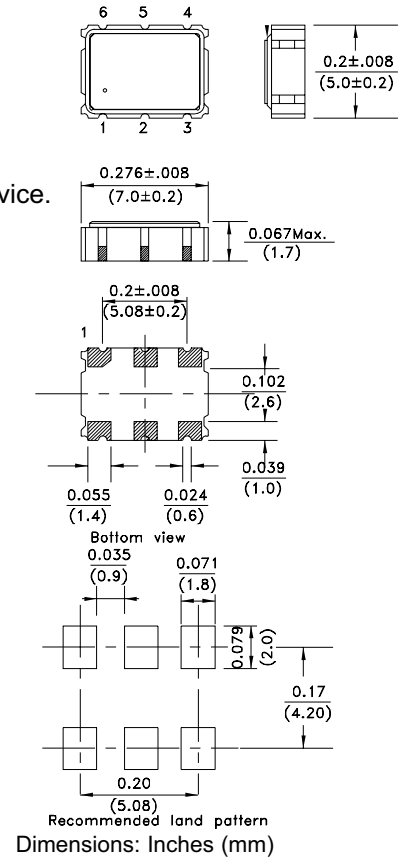
| PARAMETERS | ASLV | ASVV |
|--|---|---|
| Frequency Range (F ₀) | 1.00 MHz - 155.52 MHz (See Note) | |
| Operating Temperature (T _{OPR}) | 0°C to +70°C (See Option) | |
| Storage Temperature (T _{STO}) | -40°C to +85°C | |
| Frequency Stability (ΔF/F ₀) | ±50ppm max. (See Options) | |
| Supply Voltage (V _{dd}) | 5Vdc ±5% | 3.3Vdc ±5% |
| Input Current (I _{dd}) | 10mA max. for F ≤ 20MHz 20mA max. for F ≤ 40MHz 30mA max. for F ≤ 60MHz | 10mA max. for F ≤ 20MHz 15mA max. for F ≤ 40MHz 25mA max. for F ≤ 60MHz |
| Duty Cycle or Symmetry | 40 / 60% max. (See Options) | |
| Rise and Fall Times (T _R / T _F) | 8ns max. | |
| Output Load | 15pF or 2TTL | |
| Output Voltage (V _{OH}) (V _{OL}) | 0.9 *V _{dd} min. 0.1*V _{dd} max. | |
| Transfer Function | Positive | |
| Voltage Control (V _c) | 2.5Vdc ±2.0V | 1.65Vdc ±1.5V |
| Frequency Deviation | ±100ppm min. (See options) | ±80ppm min. (See options) |
| Linearity | ±10% max. | |
| Start-up Time (T _{OSC}) | 10ms max. | |
| Tristate Function (V _{IH}) (V _{IL}) | '1' OR OPEN: OSCILLATION ≥ 2.2V '0' (HiZ) < 0.8V | |
| Period jitter one sigma | ±10ps max. | |
| Period jitter absolute | ±100ps max. | |

A bypass capacitor 0.01 μF is required from V_{dd} to Gnd.
Please call us for higher frequencies. Test circuit, waveforms, see appendix B.
Environmental and mechanical specifications see appendix C, Group 2.
Marking, see appendix G. Tape and Reel, see appendix H. (1,000 pcs.reel).
Application notes, see appendix A. Recommended handling, see appendix F.

ORDERING OPTIONS

ASXV- Frequency - Temperature stability - Duty Cycle - Pulling - Packaging

| | | |
|--------------|--|---------------------|
| L or V | -S for 45/55% @ 1/2 V _{dd} | -T Tape and Reel |
| XX.XXXXX MHz | N102 for ± 100ppm min. @V _c = 0V to 3.0Vdc* N122 for ± 120ppm min. @V _c = 0V to 3.0Vdc* | |



Note:
Higher frequencies available. Please call.

** pin 5 E/D
(ASLV1 or ASVV1)

| PIN NO. | FUNCTION |
|---------|--------------------------------|
| 1 | Voltage Control V _c |
| 2 | Tristate E/D |
| 3 | GND / Case |
| 4 | Output |
| 5 | N / C ** |
| 6 | V _{dd} |

| Operating Temperature Range | Frequency stability (± ppm) | | | | | |
|-----------------------------|-----------------------------|-------|-------|-------|-------|-------|
| | 5ppm code | 10ppm | 15ppm | 20ppm | 30ppm | 50ppm |
| 0°C~50°C | I | 0 | 0 | 0 | 0 | 0 |
| 0°C~60°C | B | 0 | 0 | 0 | 0 | 0 |
| -10°C~60°C | D | 0 | 0 | 0 | 0 | 0 |
| 0°C~70°C | C | 0 | 0 | 0 | 0 | 0 |
| -10°C~70°C | F | 0 | 0 | 0 | 0 | 0 |
| -20°C~70°C | E | 0 | 0 | 0 | 0 | 0 |
| -40°C~85°C | L | 0 | 0 | 0 | 0 | 0 |

0= available

NOTE: Left blank if standard • All specifications and markings subject to change without notice



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