

ULTRA MINIATURE SMD VC/TCXO



2.5 X 2.0 X 0.9mm



RoHS
Compliant

ASVTX-12/ASTX-12

Moisture Sensitivity Level (MSL) –1

FEATURES:

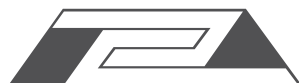
- Ultra miniature and low height 0.9mm.
- Low current consumption 2.5mA.
- Vc function corresponds to PLL circuits.
- Suitable for RoHS reflow profile.
- Low phase noise.

APPLICATIONS:

- Cellular and cordless phones.
- Standard OSC for exact equipment.
- Mobile communication equipment.
- Portable radio equipment.
- Personal Digital Assistants (PDAs).
- Portable music players.

STANDARD SPECIFICATIONS:

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|--|---------|---------|-------|---|
| Frequency Range | 13 | | 52 | MHz | |
| Standard Frequencies | 13, 16.368, 16.369, 19.2, 26, 38.4, 40, 52 | | | MHz | |
| Operating Temperature | -30 | | +85 | °C | See option (Table 1) |
| Storage Temperature | -40 | | +85 | °C | |
| Frequency Stability $\Delta f/f_0$ vs Tolerance (@+25°C) | -2.0 | | +2.0 | ppm | +25°C, Vcon=1.4V After 2 time reflow |
| Temperature (ref. to +25°C) | -1.0 | | +1.0 | | See option (Table 1) |
| Supply Voltage Change (Vdd±5%) | -0.2 | | +0.2 | | |
| Load Change (ZL±10%) | -0.2 | | +0.2 | | |
| Control Voltage (Vcon) (ASVTX-12 only) | +0.4 | | +2.4 | V | Option A |
| | +0.4 | | +2.4 | | Option B |
| | +0.4 | | +2.4 | | Option C |
| | +0.3 | | +1.5 | | Option D |
| Supply Voltage (Vcc) | +2.85 | +3.0 | +3.15 | V | Option A |
| | +2.66 | +2.8 | +2.94 | | Option B |
| | +2.375 | +2.5 | +2.625 | | Option C |
| | +1.71 | +1.8 | +1.89 | | Option D |
| Aging (first year @+25±2°C) | -1.0 | | +1.0 | ppm | |
| Supply Current (Icc) | | | 2.0 | mA | 13MHz ≤ Fo < 26MHz |
| | | | 2.5 | mA | 26MHz ≤ Fo ≤ 52MHz |
| Startup Time | | | 2.0 | ms | |
| Frequency Tuning Range (ASVTX-12 only) | ±5.0 | | ±9.5 | ppm | |
| Vcon Input Impedance (ASVTX-12 only) | 500 | | | kΩ | |
| Frequency Tuning Transition | Positive | | | | |
| Output Voltage | 0.8 | | | Vp-p | |
| Harmonics | | | -5.0 | dBc | |
| Load | 10kΩ//10pF | | | | |
| Waveform | Clipped Sine Wave | | | | |
| Phase Noise @ 19.2MHz | | | | | |
| 100Hz offset from the carrier | | -115 | -100 | dB/Hz | |
| 1kHz offset from the carrier | | -135 | -125 | | |
| 10kHz offset from the carrier | | -150 | -140 | | |



ULTRA MINIATURE SMD VC/TCXO



2.5 X 2.0 X 0.9mm

ASVTX-12/ASTX-12



RoHS
Compliant

OPTIONS & PART IDENTIFICATION: (left blank if standard)

ASVTX-12 or ASTX-12 - - MHz - -

| Vdd (V) |
|------------|
| A: 3.0V±5% |
| B: 2.8V±5% |
| C: 2.5V±5% |
| D: 1.8V±5% |

| Frequency in MHz |
|---|
| Please specify the frequency in MHz. e.g. 19.200MHz 26.000MHz |

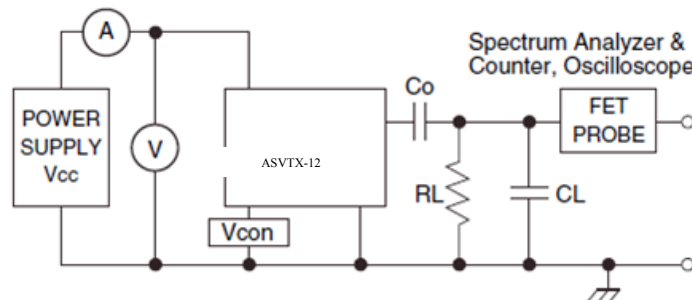
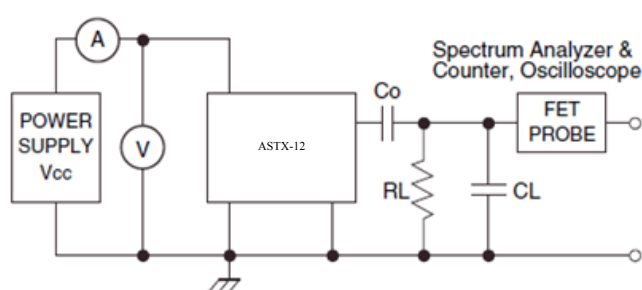
| Packaging |
|------------------|
| T: 1,000pcs/reel |

Table 1: Frequency Stability vs Operating Temperature

| | ±0.5ppm | ±1.0ppm | ±1.5ppm | ±2.0ppm | ±2.5ppm |
|---------------|---------|---------|---------|----------------|---------|
| 0°C ~ +55°C | D05 | D10 | D15 | D20 | D25 |
| -10°C ~ +60°C | E05 | E10 | E15 | E20 | E25 |
| 0°C ~ +70°C | F05 | F10 | F15 | F20 | F25 |
| -20°C ~ +70°C | G05 | G10 | G15 | G20 | G25 |
| -30°C ~ +85°C | H05* | H10 | H15 | STD (Blank) | H25 |
| -40°C ~ +85°C | | I10* | I15 | I20 | I25 |

*Please contact Abracon for availability

RECOMMENDED TEST CIRCUIT



RL=10kΩ±10% CL=10pF±10%
 • CL include Probe Capacitance
 Co: DC Cut Capacitance

ULTRA MINIATURE SMD VC/TCXO

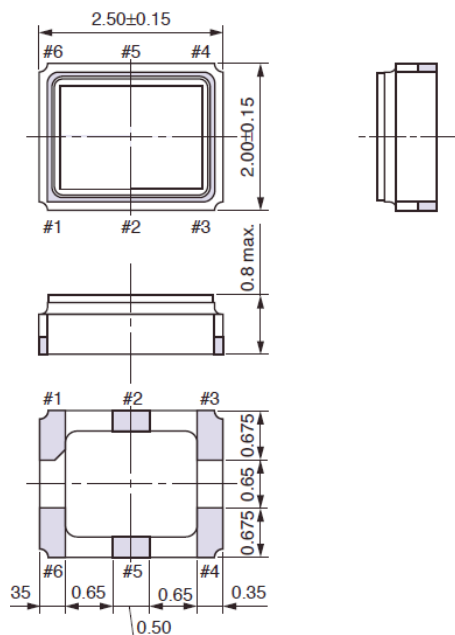


2.5 X 2.0 X 0.9mm

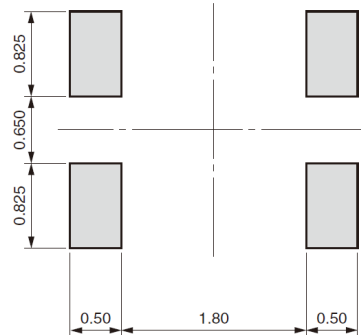
ASVTX-12/ASTX-12



OUTLINE DIMENSIONS:



Recommended Land Pattern



| | Pin Configuration |
|----------|-------------------|
| #1 pin | GND |
| #3 pin | GND |
| #4 pin | OUTPUT |
| #6 pin | Vcc |
| #2/5 pin | N.C. |

| | Pin Configuration |
|----------|-------------------|
| #1 pin | Vcon |
| #3 pin | GND |
| #4 pin | OUTPUT |
| #6 pin | Vcc |
| #2/5 pin | N.C. |

ASTX-12 TCXO

ASVTX-12 VCTCXO

Note1:

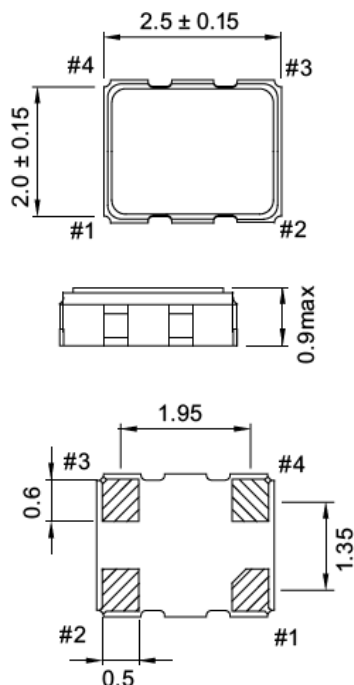
It is recommended that a by-pass capacitor of 0.01uF value be placed between pin #6 and pin #3 and an AC-coupling capacitor of the same value be placed in series with pin#4 for optimal performance.

For ASTX, please connect pin #1 and #3 to GND.

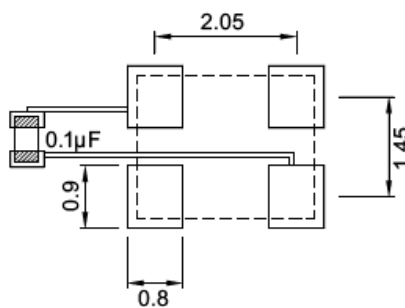
Note2:

Pin#2 and Pin#5 should be left floating (No Connect = N.C.)

Dimensions: mm



Recommended Land Pattern



| PIN | FUNCTION | |
|-----|----------|------|
| | ASVTX | ASTX |
| 1 | Vcon | GND |
| 2 | GND | |
| 3 | OUTPUT | |
| 4 | Vcc | |

Note:

It is recommended that a by-pass capacitor of 0.1uF value be placed between pin #2 and pin #4 and an AC-coupling capacitor of the same value be placed in series with pin#3 for optimal performance.

Dimensions: mm

ULTRA MINIATURE SMD VC/TCXO



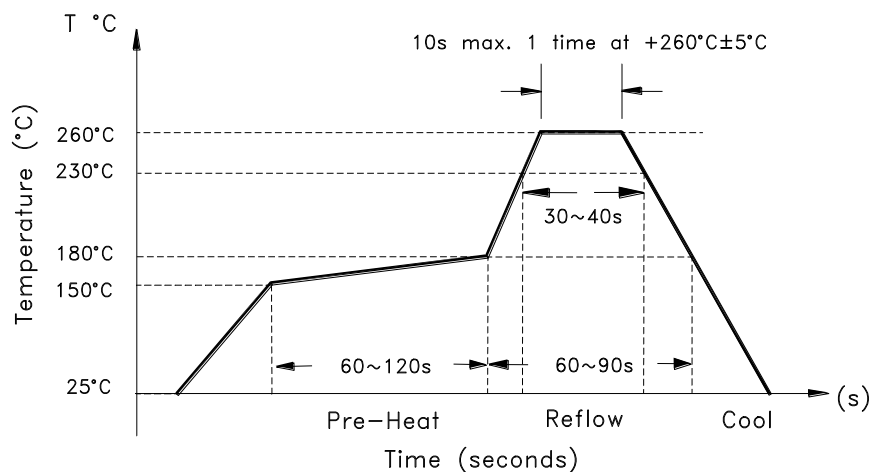
2.5 X 2.0 X 0.9mm

ASVTX-12/ASTX-12



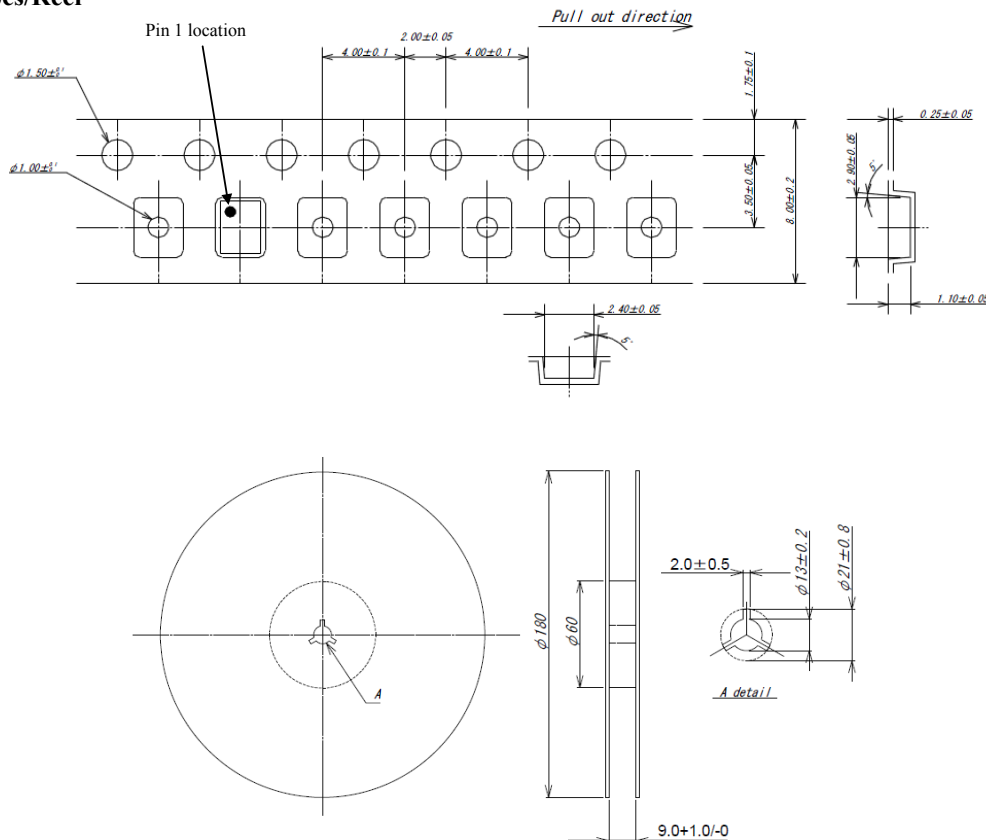
RoHS
Compliant

REFLOW PROFILE



TAPE & REEL:

T: 1,000pcs/Reel



Dimensions: mm

ATTENTION: Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS
ISO9001:2008
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 12.18.12**
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8000 | www.abracon.com



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.