

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



ESD Sensitive



2.5 x 2.0 x 0.95mm

RoHS/RoHS II Compliant

MSL Level = 1

Features

- Continuous Vdd operation from 1.6 V ~ 3.63 V
- Optimized for low current consumption
- Output Enable/Start & Disable/Stop function
- Output waveform CMOS/HCMOS/LVCMOS compatible
- Hermetically seam-sealed ceramic package

Applications

- Portable & wearable electronics
- Internet of Things (IoT)
- Consumer electronics
- Industrial control & automation
- Mobile communication

Electrical Specifications

| Parameters | Min. | Typ. | Max. | Units | Notes | |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------|--------------------|-------|-------------------------|-----|
| Frequency Range | 1 | | 160 | MHz | | |
| Operating Temperature Range | -40 | | +85 | °C | See options | |
| Storage Temperature Range | -55 | | +125 | °C | | |
| Overall Frequency Stability ^[Note 1] | -25 | | +25 | ppm | See options | |
| Supply Voltage (Vdd) | 1.6 | | 3.63 | V | | |
| Tri-state function | “1” (VIH≥0.7*Vdd) or Open: Oscillation; “0” (VIL<0.3*Vdd): No Oscillation/Hi Z | | | V | | |
| Output Load | | | 15 | pF | CMOS | |
| Output Voltage | VOH | 0.9*Vdd | | V | | |
| | VOL | | 0.1*Vdd | | | |
| Aging 1 year @25°C± 3°C | -3.0 | | +3.0 | ppm | | |
| Aging 5 years @25°C± 3°C | -5.0 | | +5.0 | ppm | | |
| Symmetry @ ½ Vdd | 45 | 50 | 55 | % | | |
| Start-up Time | | | 5.0 | ms | | |
| Rise and Fall Time (Tr/Tf) @10%Vdd-90%Vdd, 15pF load | Vdd = 1.8V to 3.63V | | 8.0 | ns | 1MHz ≤ F ≤ 19.999MHz | |
| | | | 6.0 | | 20MHz ≤ F ≤ 39.999MHz | |
| | | | 5.0 | | 40MHz ≤ F ≤ 69.999MHz | |
| | | | 5.0 | | 70MHz ≤ F ≤ 99.999MHz | |
| | | | 4.0 | | 100MHz ≤ F ≤ 129.999MHz | |
| | | | 3.0 | | 130MHz ≤ F ≤ 160MHz | |
| | Vdd = 1.6V | | 10.0 | | 1MHz ≤ F ≤ 19.999MHz | |
| | | | 8.0 | | 20MHz ≤ F ≤ 39.999MHz | |
| | | | 6.0 | | 40MHz ≤ F ≤ 69.999MHz | |
| | | | 6.0 | | 70MHz ≤ F ≤ 99.999MHz | |
| | | | 5.0 | | 100MHz ≤ F ≤ 129.999MHz | |
| | | | 5.0 | | 130MHz ≤ F ≤ 160MHz | |
| | | Vdd = 3.0V to 3.63V | | | 5.0 | |
| | | | Vdd = 1.6V to 2.5V | | | 7.0 |
| RMS Period Jitter @25°C± 3°C | | | | ps | | |
| RMS Phase Jitter @25°C± 3°C (10 - 39MHz: 12kHz to 5MHz) (>39MHz: 12kHz to 20MHz) | | | 1.0 | ps | | |
| Disable Current | | | 10.0 | µA | | |

*Note 1: Overall frequency stability includes initial frequency tolerance @25°C± 3°C and stability over the operating temperature range.



5101 Hidden Creek Ln Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
 ISO9001-2015
 CERTIFIED

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



ESD Sensitive



2.5 x 2.0 x 0.95mm
RoHS/RoHS II Compliant
MSL Level = 1

Electrical Specifications *continued*

| Parameters | Min. | Typ. | Max. | Units | Notes |
|----------------------------------------------------------------------------------------|------|------|-------------------------|-------|-------------------------|
| Supply Current (I _{dd}) into 15pF Load @25°C± 3°C @ V _{dd} =3.3V | | | 2.0 | mA | 1MHz ≤ F ≤ 5.999MHz |
| | | | 2.0 | | 6MHz ≤ F ≤ 9.999MHz |
| | | | 3.0 | | 10MHz ≤ F ≤ 19.999MHz |
| | | | 4.0 | | 20MHz ≤ F ≤ 29.999MHz |
| | | | 5.0 | | 30MHz ≤ F ≤ 39.999MHz |
| | | | 5.0 | | 40MHz ≤ F ≤ 45.999MHz |
| | | | 5.0 | | 46MHz ≤ F ≤ 48.999MHz |
| | | | 6.0 | | 49MHz ≤ F ≤ 50.999MHz |
| | | | 8.0 | | 51MHz ≤ F ≤ 54.999MHz |
| | | | 8.0 | | 55MHz ≤ F ≤ 60.999MHz |
| | | | 12.5 | | 61MHz ≤ F ≤ 75.999MHz |
| | | | 14.5 | | 76MHz ≤ F ≤ 80.999MHz |
| | | | 14.5 | | 81MHz ≤ F ≤ 105.999MHz |
| | | | 15.5 | | 106MHz ≤ F ≤ 119.999MHz |
| | | | 15.5 | | 120MHz ≤ F ≤ 130.999MHz |
| | | 18.0 | 131MHz ≤ F ≤ 139.999MHz | | |
| | | 18.0 | 140MHz ≤ F ≤ 149.999MHz | | |
| | | 18.0 | 150MHz ≤ F ≤ 156.999MHz | | |
| | | 19.0 | 157MHz ≤ F ≤ 160MHz | | |
| Supply Current (I _{dd}) into 15pF Load @25°C± 3°C @ V _{dd} =2.5V | | | 1.3 | mA | 1MHz ≤ F ≤ 5.999MHz |
| | | | 1.3 | | 6MHz ≤ F ≤ 9.999MHz |
| | | | 2.0 | | 10MHz ≤ F ≤ 19.999MHz |
| | | | 3.0 | | 20MHz ≤ F ≤ 29.999MHz |
| | | | 3.5 | | 30MHz ≤ F ≤ 39.999MHz |
| | | | 4.5 | | 40MHz ≤ F ≤ 45.999MHz |
| | | | 4.5 | | 46MHz ≤ F ≤ 48.999MHz |
| | | | 5.0 | | 49MHz ≤ F ≤ 50.999MHz |
| | | | 6.5 | | 51MHz ≤ F ≤ 54.999MHz |
| | | | 7.0 | | 55MHz ≤ F ≤ 60.999MHz |
| | | | 10.0 | | 61MHz ≤ F ≤ 75.999MHz |
| | | | 11.5 | | 76MHz ≤ F ≤ 80.999MHz |
| | | | 11.5 | | 81MHz ≤ F ≤ 105.999MHz |
| | | | 12.5 | | 106MHz ≤ F ≤ 119.999MHz |
| | | | 12.5 | | 120MHz ≤ F ≤ 130.999MHz |
| | | 14.0 | 131MHz ≤ F ≤ 139.999MHz | | |
| | | 14.0 | 140MHz ≤ F ≤ 149.999MHz | | |
| | | 14.0 | 150MHz ≤ F ≤ 156.999MHz | | |
| | | 15.0 | 157MHz ≤ F ≤ 160MHz | | |
| Supply Current (I _{dd}) into 15pF Load @25°C± 3°C @ V _{dd} =1.8V | | | 1.0 | mA | 1MHz ≤ F ≤ 5.999MHz |
| | | | 1.0 | | 6MHz ≤ F ≤ 9.999MHz |
| | | | 1.6 | | 10MHz ≤ F ≤ 19.999MHz |
| | | | 2.2 | | 20MHz ≤ F ≤ 29.999MHz |
| | | | 2.5 | | 30MHz ≤ F ≤ 39.999MHz |
| | | | 3.0 | | 40MHz ≤ F ≤ 45.999MHz |
| | | | 3.5 | | 46MHz ≤ F ≤ 48.999MHz |
| | | | 3.5 | | 49MHz ≤ F ≤ 50.999MHz |
| | | | 3.5 | | 51MHz ≤ F ≤ 54.999MHz |
| | | | 4.0 | | 55MHz ≤ F ≤ 60.999MHz |
| | | | 9.0 | | 61MHz ≤ F ≤ 75.999MHz |
| | | | 9.0 | | 76MHz ≤ F ≤ 80.999MHz |
| | | | 10.0 | | 81MHz ≤ F ≤ 105.999MHz |
| | | | 10.0 | | 106MHz ≤ F ≤ 119.999MHz |
| | | | 10.5 | | 120MHz ≤ F ≤ 130.999MHz |
| | | 10.5 | 131MHz ≤ F ≤ 139.999MHz | | |
| | | 11.5 | 140MHz ≤ F ≤ 149.999MHz | | |
| | | 11.5 | 150MHz ≤ F ≤ 156.999MHz | | |
| | | 11.5 | 157MHz ≤ F ≤ 160MHz | | |



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
ISO9001-2015
CERTIFIED

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



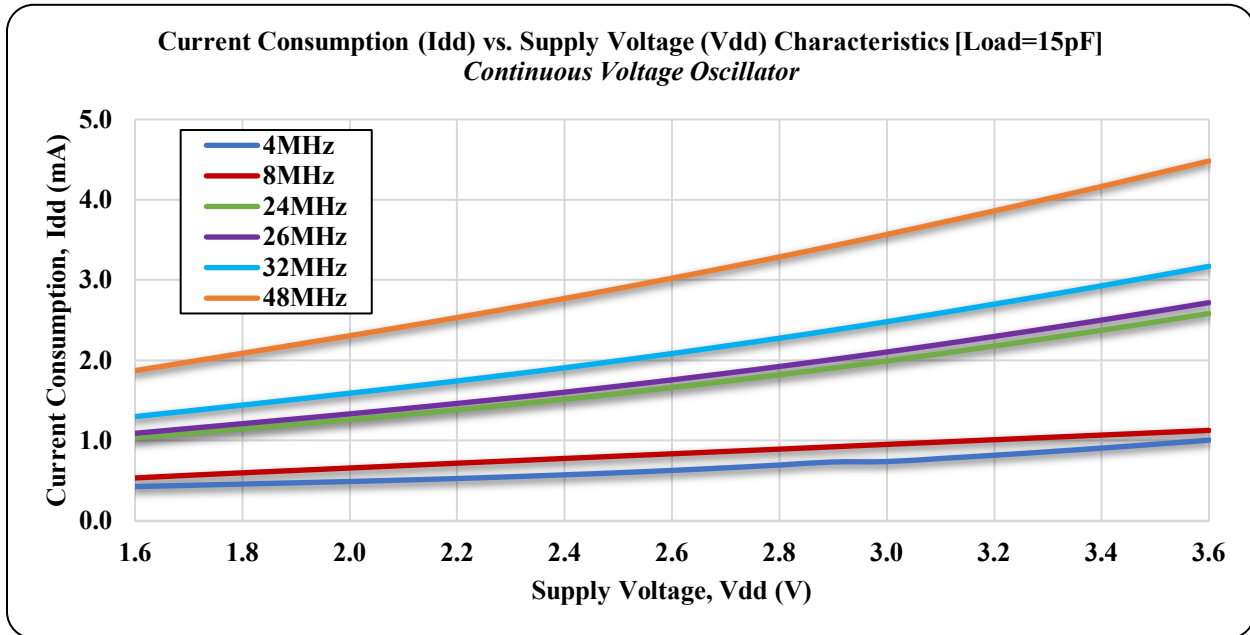
2.5 x 2.0 x 0.95mm
RoHS/RoHS II Compliant
MSL Level = 1



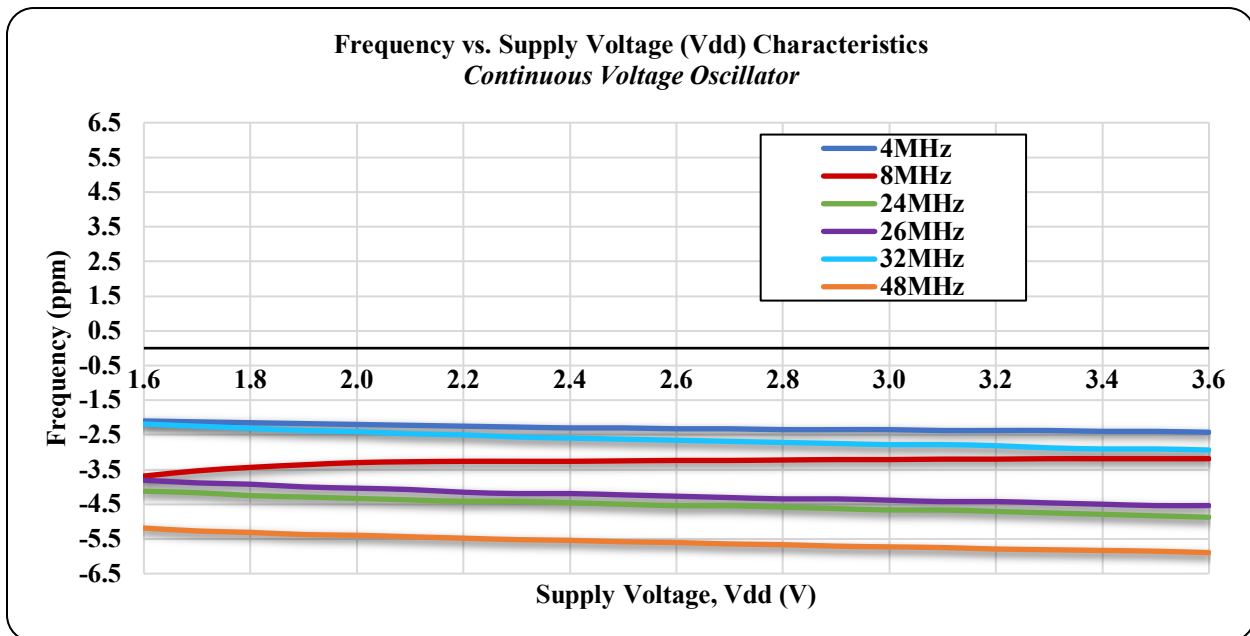
ESD Sensitive



Typical Current Consumption (I_{dd}) vs. Supply Voltage (V_{dd}) Characteristics @25°C±3°C [Load = 15pF]



Typical Frequency vs. Supply Voltage (V_{dd}) Characteristics @ 25°C±3°C



CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



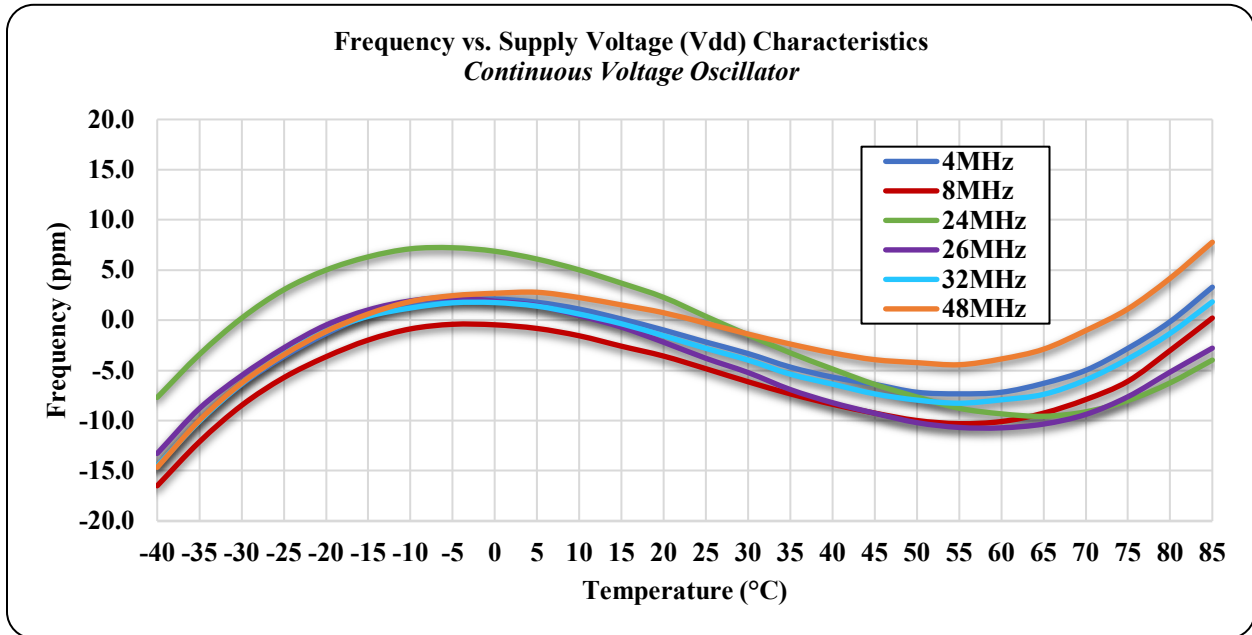
2.5 x 2.0 x 0.95mm
RoHS/RoHS II Compliant
MSL Level = 1



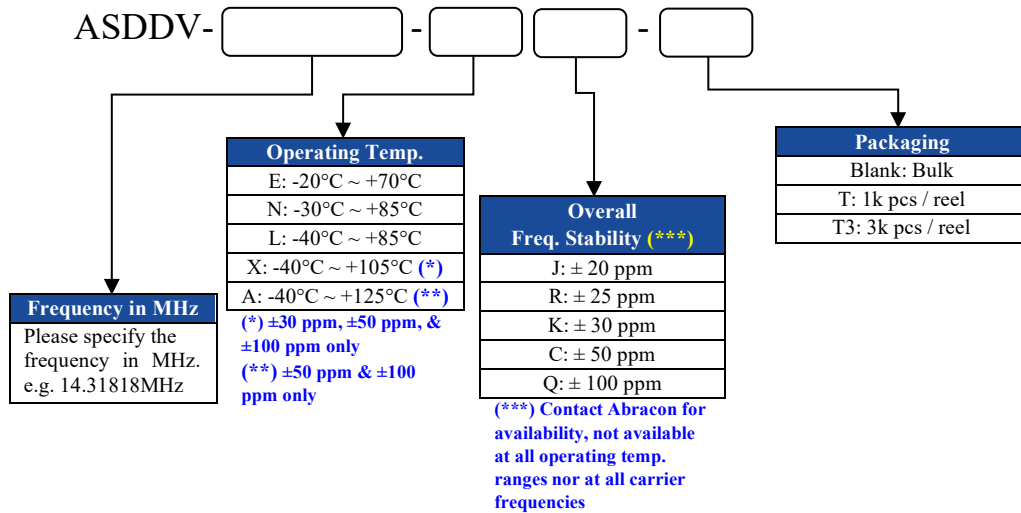
ESD Sensitive



Typical Frequency vs. Temperature Characteristics



Part Identification



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
ISO9001-2015
CERTIFIED

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory

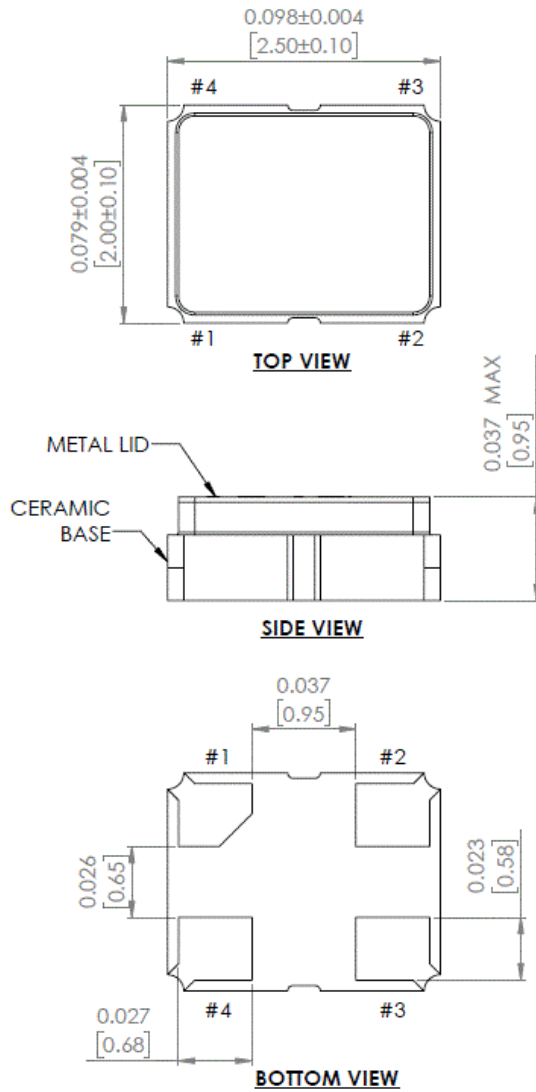


ESD Sensitive

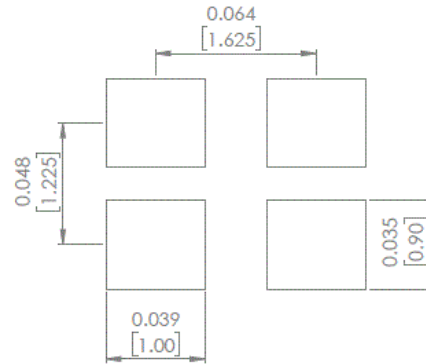


2.5 x 2.0 x 0.95mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Dimensions



Recommended Land Pattern



| Pin # | Function |
|-------|-----------|
| 1 | Tri-State |
| 2 | GND |
| 3 | Output |
| 4 | Vdd |

Note: Recommended to use approximately 0.01µF bypass capacitor between PIN 2 and PIN 4

Dimensions: inches (mm)



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
ISO9001-2015
CERTIFIED

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



ESD Sensitive



2.5 x 2.0 x 0.95mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile [JEDEC J-STD-020]

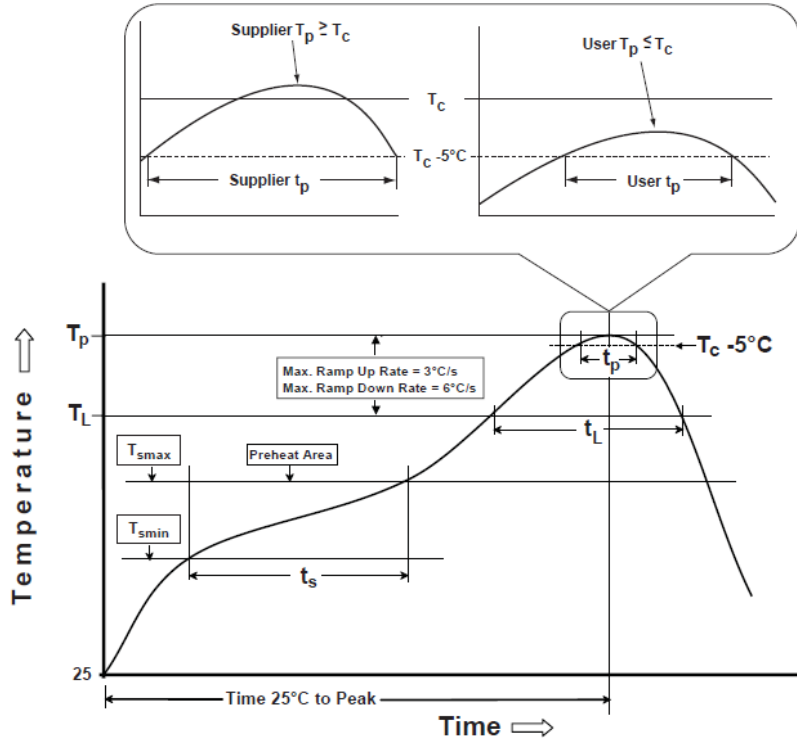


Table 1

SnPb Eutectic Process
Classification Temperatures (T_c)

| Package Thickness | Volume mm ³ <350 | Volume mm ³ ≥350 |
|-------------------|-----------------------------|-----------------------------|
| <2.5 mm | 235 °C | 220 °C |
| ≥2.5 mm | 220 °C | 220 °C |

Table 2

Pb-Free Process
Classification Temperatures (T_c)

| Package Thickness | Volume mm ³ <350 | Volume mm ³ 350-2000 | Volume mm ³ >2000 |
|-------------------|-----------------------------|---------------------------------|------------------------------|
| <1.6 mm | 260 °C | 260 °C | 260 °C |
| 1.6 mm - 2.5 mm | 260 °C | 250 °C | 245 °C |
| >2.5 mm | 250 °C | 245 °C | 245 °C |

| Profile Feature | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|-----------------------------------------------------------------------------------|-------------------------|------------------|
| Preheat / soak | | |
| Temperature minimum (T_{smin}) | 100°C | 150°C |
| Temperature maximum (T_{smax}) | 150°C | 200°C |
| Time (T_{smin} to T_{smax}) (t_s) | 60 - 120 sec. | 60 - 120 sec. |
| Average ramp-up rate (T_{smax} to T_p) | 3°C/sec. max | 3°C/sec. max |
| Liquidous temperature (T_L) | 183°C | 217°C |
| Time at liquidous (t_L) | 60 - 150 sec. | 60 - 150 sec. |
| Peak package body temperature (T_p)* | see Table 1 | see Table 2 |
| Time (t_p)** within 5°C of the specified classification temperature (T_c) | 20 sec. | 30 sec. |
| Ramp-down rate (T_p to T_{smax}) | 6°C/sec. max | 6°C/sec. max |
| Time 25°C to peak temperature | 6 min. max | 8 min. max |
| Reflow cycles | 2 max | 2 max |

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
ISO9001-2015
CERTIFIED

CONTINUOUS VOLTAGE SMD CRYSTAL OSCILLATOR

ASDDV

Request Samples



Check Inventory



2.5 x 2.0 x 0.95mm
 RoHS/RoHS II Compliant
 MSL Level = 1



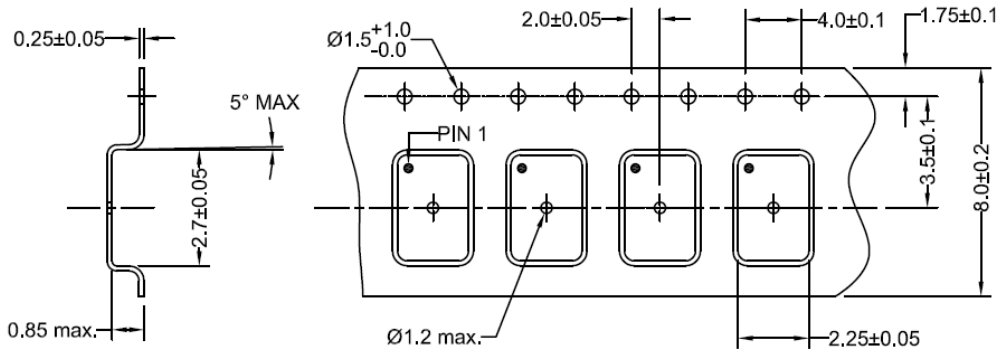
ESD Sensitive



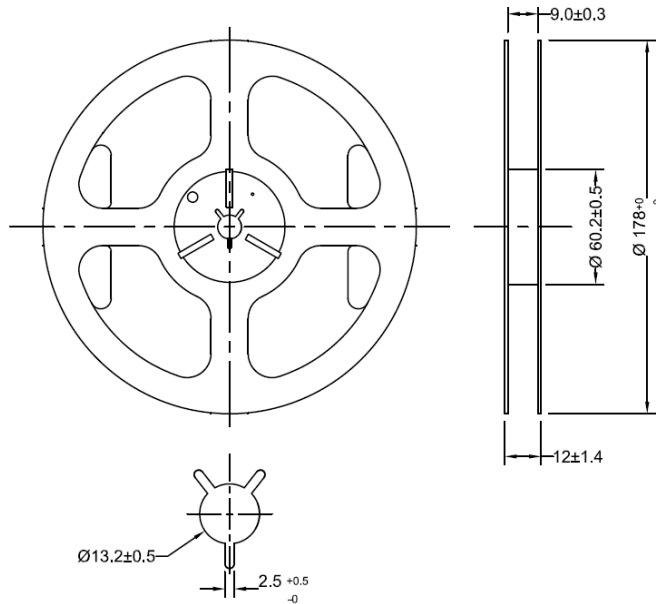
Packaging

T: 1,000pcs/reel

T3: 3,000pcs/reel



FEEDING (PULL) DIRECTION



Dimensions: inches (mm)

ATTENTION: Abracon LLC'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-dependent 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 LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 01-11-22

ABRACON IS
 ISO9001-2015
 CERTIFIED

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Standard Clock Oscillators](#) category:

Click to view products by [Abracon](#) manufacturer:

Other Similar products are found below :

[601252](#) [F335-25](#) [F535L-33.333](#) [F535L-50](#) [ASV-20.000MHZ-LR-T](#) [ECS-2018-160-BN-TR](#) [MXO45HS-2C-66.6666MHZ](#) [SiT1602BI-22-33E-50.000000E](#) [SiT8209AI-32-33E-125.000000](#) [SIT8918AA-11-33S-50.000000G](#) [SM4420TEV-40.0M-T1K](#) [F335-24](#) [F335-40](#) [F535L-10](#) [F535L-12](#) [F535L-16](#) [F535L-24](#) [F535L-27](#) [F535L-48](#) [PE7744DW-100.0M](#) [CSX-750FCC14745600T](#) [ASF1-3.686MHZ-N-K-S](#) [XO57CTECNA3M6864](#) [ECS-2100A-147.4](#) [601251](#) [EP16E7E2H26.000MTR](#) [SIT8918AA-11-33S-16.000000G](#) [XO3003](#) [9120AC-2D2-33E212.500000](#) [9102AI-243N25E100.00000](#) [8208AC-82-18E-25.00000](#) [ASDK2-32.768KHZ-LR-T3](#) [8008AI-72-XXE-24.545454E](#) [8004AC-13-33E-133.33000X](#) [AS-4.9152-16-SMD-TR](#) [ASFL1-48.000MHZ-LC-T](#) [SIT8920AM-31-33E-25.0000](#) [DSC1028DI2-019.2000](#) [9121AC-2C3-25E100.00000](#) [9102AI-233N33E100.00000X](#) [9102AI-233N25E200.00000](#) [9102AI-232H25S125.00000](#) [9102AI-133N25E200.00000](#) [9102AC-283N25E200.00000](#) [9001AC-33-33E1-30.000](#) [3921AI-2CF-33NZ125.000000](#) [5730-1SF](#) [PXA000010](#) [8003AI-12-33S-40.00000Y](#) [1602BI-13-33S-19.200000E](#)