

ECN/PCN No.: 3806

| For Manufacturer | | | |
|--|--|--|--|
| Product Description: Tight Stability SMD Clock Oscillator | Abrakon Part Number / Part Series: ASET Series | <input type="checkbox"/> Documentation only <input type="checkbox"/> ECN <input checked="" type="checkbox"/> EOL | <input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number |
| Affected Revision: L | New Revision: EOL | Application: | <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety |
| Prior to Change: ACTIVE https://abracon.com/Oscillators/ASET.pdf | | | |
| After Change: EOL | | | |
| Cause/Reason for Change: Production will be discontinued due to material constraint issues. | | | |
| Change Plan | | | |
| Effective Date: 4/27/21 | Additional Remarks: | | |
| Change Declaration: | | | |
| Issued Date: 4/27/21 | Issued By: Stephanie Lopez | Issued Department: Engineering | |
| Approval: Thomas Culhane Engineering Director | Approval: Reuben Quintanilla Quality Director | Approval: Ying Huang Purchasing Director | |
| For Abracon EOL only | | | |
| Last Time Buy (if applicable): None | Alternate Part Number / Part Series: None | | |
| Additional Approval: | Additional Approval: | Additional Approval: | |
| Customer Approval (If Applicable) | | | |
| Qualification Status: <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i> | | | |
| Customer Part Number: | | Customer Project: | |
| Company Name: | Company Representative: | Representative Signature: | |
| Customer Remarks: | | | |

TIGHT STABILITY INDUSTRIAL GRADE CRYSTAL OSCILLATOR

ASET SERIES



ESD Sensitive



RoHS/RoHS II compliant



3.2 x 2.5 x 1.2mm

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:

- Highly reliable seam-sealed package
- Low current consumption 7mA
- Low phase noise and jitter
- Industrial grade tight temperature stability available ($\pm 10\text{ppm}$ / -40 to $+85^\circ\text{C}$)
- Fast start-up time 0.2ms typical
- CMOS output with Tri-state function

APPLICATIONS:

- Home networking by AC socket
- Wireless LAN
- Mobile communications
- PLC modem
- WiMax

STANDARD SPECIFICATIONS:

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|------------------------------|---|---------|----------|------------------|---------------|
| Frequency Range | 4 | | 54 | MHz | |
| Standard Frequencies | 5, 10, 12, 16, 20, 24, 26, 27, 32, 40, 44 | | | MHz | |
| Operating Temperature | -40 | | +85 | $^\circ\text{C}$ | |
| Storage Temperature | -40 | | +85 | $^\circ\text{C}$ | |
| Overall Frequency Stability* | -15 | | +15 | ppm | See options |
| Supply Voltage (Vdd) | +2.7 | 3.0 | +3.3 | V | See options |
| Supply Current (Idd) | | | 7.0 | mA | |
| Stand-by Current | | | 10 | uA | |
| Symmetry | 45 | | 55 | % | @ 1/2Vdd |
| Rise and Fall Time (Tr/Tf) | | | 5.0 | ns | 10%Vdd-90%Vdd |
| Output Load | | | 15 | pF | CMOS |
| Output Voltage (VOH) | 0.9* Vdd | | | V | |
| Output Voltage (VOL) | | | 0.1* Vdd | V | |
| Start-up Time | | 0.2 | 3.0 | ms | |
| RMS Jitter | | 3.0 | | ps | |
| Tri-state function | "1" ($V_{IH} \geq 0.7*V_{dd}$) or Open: Oscillation "0" ($V_{IH} < 0.3*V_{dd}$) : Hi Z | | | | |
| Phase Noise (@10kHz offset) | | -143 | | dBc/Hz | |
| Aging@+25 $^\circ\text{C}$ | -2 | | +2 | ppm | First year |
| | -7 | | +7 | | 10 years |

* Overall frequency stability includes initial tolerance @ +25 $^\circ\text{C}$, and temperature stability

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASET- - MHz - -

| Supply Voltage |
|-----------------------|
| Blank: 3.0 $\pm 10\%$ |
| A: 2.7 $\pm 10\%$ |
| B: 3.3 $\pm 10\%$ |
| C: 2.8 $\pm 10\%$ |
| D: 2.5 $\pm 10\%$ |

| Frequency in MHz |
|--|
| Please specify the frequency in MHz. e.g. 24.000MHz |

| Overall Freq. Stability |
|---------------------------|
| Blank: $\pm 15\text{ppm}$ |
| Y: $\pm 10\text{ppm}$ |
| R7*: $\pm 7\text{ppm}$ |
| R5*: $\pm 5\text{ppm}$ |

| Packaging |
|----------------|
| Blank: Bulk |
| T: Tape & Reel |

*Contact Abracon for availability



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ASET SERIES

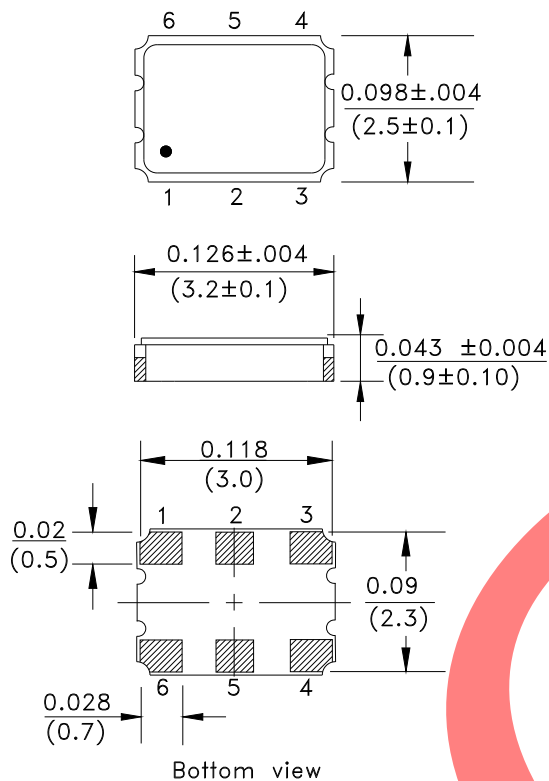


RoHS/RoHS II compliant

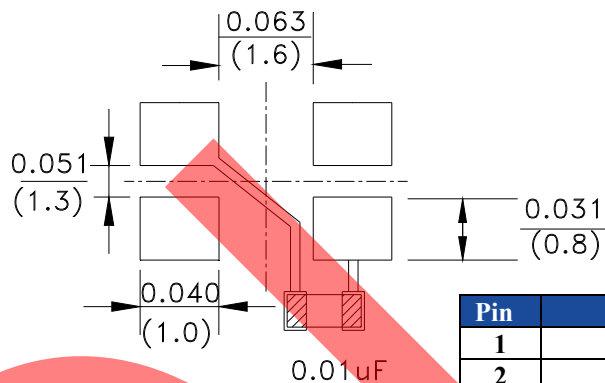


3.2 x 2.5 x 1.2mm

OUTLINE DRAWING:



Recommended land pattern



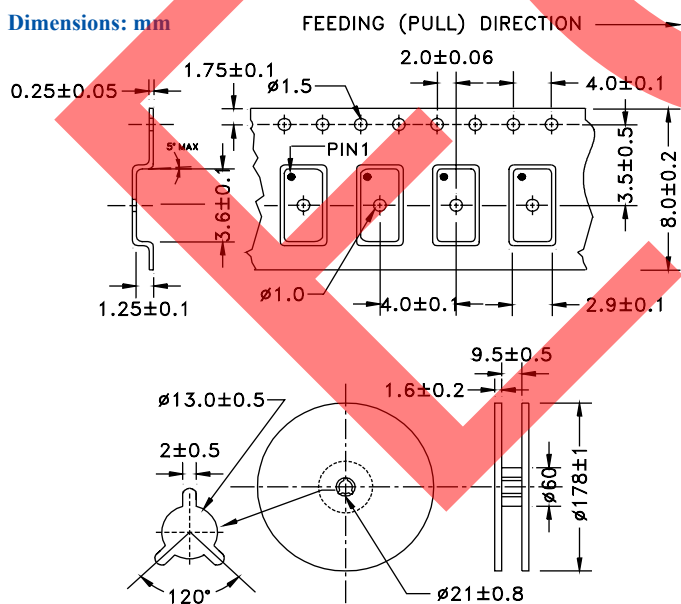
| Pin | Function |
|-----|----------|
| 1 | OE |
| 2 | NC |
| 3 | GND |
| 4 | Output |
| 5 | NC |
| 6 | Vdd |

Note: Recommend using an approximately $0.01 \mu F$ bypass capacitor between PIN 3 and 6.

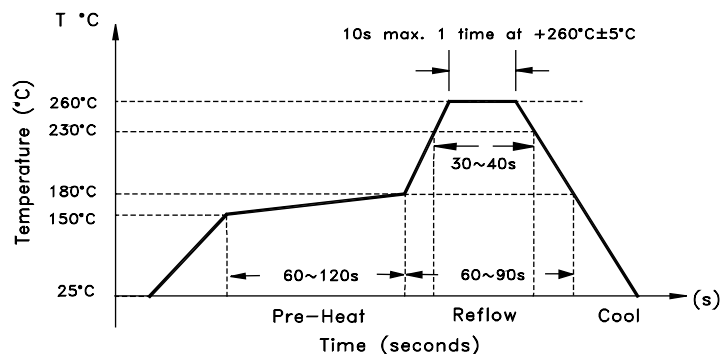
Dimensions: Inches (mm)

TAPE & REEL: T= tape and reel (1,000 pcs/reel)

Dimensions: mm



REFLOW PROFILE



Need a test socket for the ASET Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#). P/N: AXS-3225-04-05

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