

TIGHT STABILITY INDUSTRIAL GRADE CRYSTAL OSCILLATOR



3.2 x 2.5 x 0.9mm

ASET SERIES



RoHS
Compliant

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	
ABRACON P/N:	ASET Series
Frequency:	4.000MHz to 54.000MHz
Standard Frequencies:	5, 10, 12, 16, 20, 24, 26, 27, 32, 40, 44MHz
Output level:	CMOS
Operating temperature:	-40°C to +85°C
Storage temperature:	-40°C to +85°C
Overall Frequency Stability*:	$\pm 15\text{ppm}$ (see options)
Supply voltage (Vdd):	3.0Vdc $\pm 10\%$ (see options)
Supply Current (Idd):	7mA max.
Stand-by Current	10 μA max.
Symmetry:	45/55 % @ 50 % Vdd
Rise and Fall Times(Tr/Tf):	5ns max. / 10 %Vdd-90%Vdd
Start-up time:	0.2ms typical, 3ms max.
Output load:	15pF max.
Output Voltage :	VOH = 0.9*Vdd min. VOL = 0.1*Vdd max.
Aging @ 25°C:	± 2 ppm/ first year, ± 7 ppm/ 10 years
Phase Noise (@ 10 kHz offset):	-143dBc/Hz Typ.
Jitter:	1 σ 3ps typ.

* Overall frequency stability includes initial tolerance @ +25°C, and temperature stability.

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASET - - Frequency - -

P/N and Vdd (V)		Frequency	Freq. Stability		Packaging	
Blank	3.0 $\pm 10\%$	XX.XXXX MHz	Blank	± 15 ppm	Blank	Bulk
A	2.7 $\pm 10\%$		Y	± 10 ppm	T	Tape and Reel
B	3.3 $\pm 10\%$		R7*	± 7 ppm		
C	2.8 $\pm 10\%$		R5*	± 5 ppm		
D	2.5 $\pm 10\%$					

* Contact ABRACON for availability



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OUTLINE DRAWING:

Top View Dimensions:
 Pin 1 to Pin 3: 0.126 ± 0.004 (3.2 ± 0.1)
 Pin 4 to Pin 6: 0.126 ± 0.004 (3.2 ± 0.1)
 Pin 1 to Pin 4: 0.098 ± 0.004 (2.5 ± 0.1)
 Pin 3 to Pin 6: 0.098 ± 0.004 (2.5 ± 0.1)
 Pin 1 to Pin 6: 0.118 (3.0)
 Pin 1 to Pin 3: 0.02 (0.5)
 Pin 3 to Pin 6: 0.028 (0.7)
 Pin 4 to Pin 6: 0.09 (2.3)
 Pin 1 to Pin 3: 0.043 ± 0.004 (0.9 ± 0.10)

Bottom View Dimensions:
 Pin 1 to Pin 3: 0.02 (0.5)
 Pin 3 to Pin 6: 0.028 (0.7)
 Pin 4 to Pin 6: 0.09 (2.3)

Recommended land pattern

Land Pattern Dimensions:
 Pin 1 to Pin 3: 0.051 (1.3)
 Pin 3 to Pin 6: 0.031 (0.8)
 Pin 1 to Pin 4: 0.063 (1.6)
 Pin 3 to Pin 6: 0.040 (1.0)

0.01 uF

Resist layer is required on the path for the by-pass capacitor.

Note : It is recommended to use an approximately 0.01uF bypass capacitor between PIN 3 and 6.

PIN	FUNCTION
1	OE
2	N.C.
3	GND
4	Output
5	N.C.
6	Vdd

Dimensions: Inches (mm)

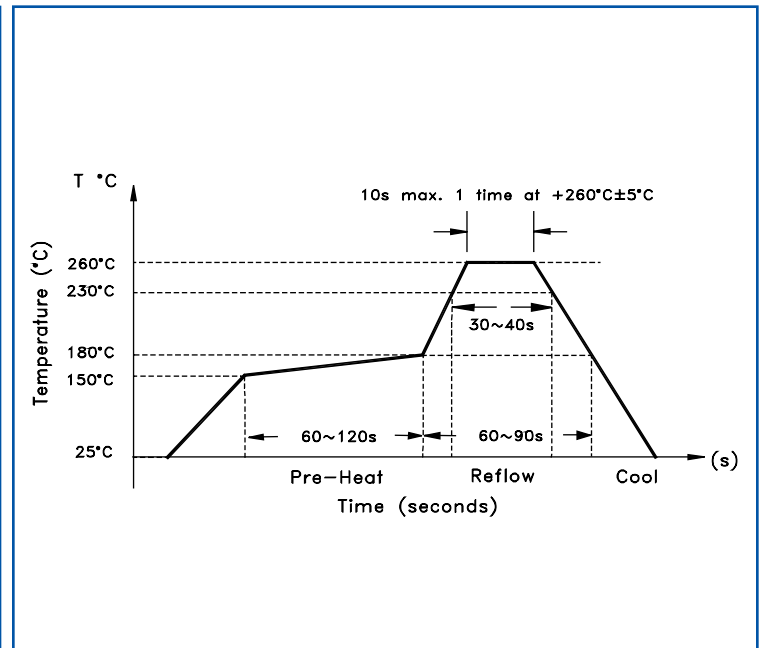
TAPE & REEL: T= tape and reel (1,000 pcs/reel)

REFLOW PROFILE

Dimensions: mm

FEEDING (PULL) DIRECTION →

Dimensions:
 0.25 ± 0.05, 1.75 ± 0.1, 2.0 ± 0.06, 4.0 ± 0.1, 3.5 ± 0.5, 8.0 ± 0.2, 1.25 ± 0.1, 3.6 ± 0.1, 5° MAX, PIN 1, 4.0 ± 0.1, 2.9 ± 0.1, 9.5 ± 0.5, 1.6 ± 0.2, 120°, 2 ± 0.5, 13.0 ± 0.5, 21 ± 0.8, 60, 178 ± 1



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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