

TIGHT STABILITY INDUSTRIAL GRADE CRYSTAL OSCILLATOR

ASFLT SERIES



RoHS
Compliant



5.0 x 3.2 x 1.2mm

FEATURES:

- Highly reliable seam-sealed package
- Low current consumption
- Low phase noise and jitter
- Industrial grade tight temperature stability ($\pm 5.0\text{ppm} / -40$ to $+85^\circ\text{C}$)
- Fast start-up time
- 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:	ASFLT Series
Frequency:	4.000MHz to 54.000MHz
Standard Frequencies:	5, 10, 12, 16, 20, 24, 32, 40, 44MHz
Output level:	CMOS
Operating temperature:	- 40°C to +85°C
Storage temperature:	- 40°C to + 85°C
Frequency Stability:	$\pm 10\text{ppm}$ (see option)
Frequency Stability vs. Vdd:	$\pm 0.5\text{ppm}$
Supply voltage (Vdd):	3.0Vdc $\pm 10\%$ (see option)
Supply Current (Idd):	7mA max. / 10 μA max. (Standby)
Symmetry:	45/55 % @ 50% Vdd
Rise and Fall Times(T_r/T_f):	5ns max. / 10%Vdd-90%Vdd
Output load:	15pF
Output Voltage:	VOH = 0.9*Vdd min. VOL = 0.1*Vdd max.
Tri State Function:	#1: NC OR "H" → Output enable #1: "L" → Output disable (Hi-Z)
Start-up-time:	0.2ms typ.
Aging per year:	$\pm 5\text{ ppm}$ @25°C
Fast enable time:	0.1ms typ.
Phase Noise (@ 10kHz offset):	-143dBc/Hz Typ.
Jitter:	1 σ 3ps typ.

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASFLT - - Frequency - -

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



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The drawing shows a 4-pin package with the following dimensions:

- Top View:**
 - Pin pitch: 0.13 ± 0.008 (3.2 $\pm$ 0.2)
 - Pin diameter: 0.041 ± 0.004 (1.05 $\pm$ 0.1)
 - Pin 1 to Pin 2 distance: 0.2 ± 0.008 (5.0 $\pm$ 0.2)
- Side View:**
 - Package height: 0.063 (1.6)
 - Pin height: 0.028 (0.7)
- Bottom View:**
 - Pin 1 to Pin 2 distance: 0.102 (2.6)
 - Pin 2 to Pin 3 distance: 0.043 (1.1)
 - Pin 3 to Pin 4 distance: 0.018 (0.45)
 - Pin 4 to Pin 1 distance: 0.063 (1.6)
 - Pin 1 to Pin 4 distance: 0.02 (0.5)

Recommended land pattern: The drawing shows a recommended land pattern for the package, with dimensions: 0.051 (1.3) for the pin diameter, 0.039 (1.0) for the pin pitch, and 0.102 (2.6) for the pin pitch.

Note: It is recommended to use an approximately 0.01uF bypass capacitor between PIN 2 and 4.

PIN	FUNCTION
1	CE
2	GND
3	Output
4	VDD

Technical drawing of a mechanical part, showing dimensions in mm.

Top View:

- Overall width: 12.0 ± 0.3
- Overall length: 8.0 ± 0.1
- Feeding (PULL) direction: Indicated by an arrow pointing right.
- Pin 1 location: Indicated by a dot and label "PIN 1".
- Pin diameter: $\phi 1.55$
- Pin pitch: 2.0 ± 0.1
- Pin offset from right edge: 4.0 ± 0.1
- Pin offset from bottom edge: 5.5 ± 0.1
- Pin offset from left edge: 1.75 ± 0.1
- Pin offset from top edge: 0.3 ± 0.005
- Pin offset from bottom edge (detail): 5.3
- Pin offset from left edge (detail): 1.5 ± 0.1
- Pin offset from top edge (detail): 5° MAX

Side View:

- Overall height: 12.4
- Overall width: $\phi 180$
- Pin diameter: $\phi 62$
- Pin offset from right edge: 12.4

Detail View:

- Overall diameter: $\phi 13.0 \pm 0.5$
- Overall width: 2.0
- Pin diameter: $\phi 20.2$
- Pin offset from right edge: 12.4
- Pin offset from bottom edge: 5.3
- Pin offset from left edge: 1.5 ± 0.1
- Pin offset from top edge: 5° MAX

Dimensions: mm