

HCMOS/TTL SMD PROGRAMMABLE CRYSTAL OSCILLATOR

ASEP SERIES



RoHS
Compliant



3.2 X 2.5 X 1.05 mm

FEATURES:

- Wide frequency range from 1MHz up to 125MHz
- Miniature size for high density applications
- -40 + 85°C industrial operating temperature available

APPLICATIONS:

- Precision clock frequency for a wide range of emerging technology applications.

STANDARD SPECIFICATIONS:

PARAMETERS

ABRACON P/N		ASEP Series			
Characteristics		Unit	Minimum	Typical	Maximum
Frequency Range		MHz	1	--	125
Operating Temp. Range * (See Options)		°C	-20	--	70
Storage Temp. Range * (See Options)		°C	-55	--	125
Freq. Stability					
Over Operating Temp.* (See Options)		ppm	-50	--	50
Supply Voltage (See options)	ASEP3	VDC	2.97	3.3	3.63
	ASEP5	VDC	4.5	5.0	5.5
Supply Current	ASEP3	mA	--	--	25
	ASEP5	mA	--	--	45
Disable Current (See options)	ASEP3	mA	--	--	15
	ASEP5	mA	--	--	30
Stand-by Current (See options)		uA	--	--	50
Output Load		CMOS	15pF (ASEP3 and ASEP5)		
		TTL	5TTL max. (ASEP5 only)		
Symmetry	CMOS (1/2Vdd)	%	40	50	60
	TTL (1.4V)	%	40	50	60
Rise Time	CMOS (20%Vdd $\Leftrightarrow$ 80%Vdd)	nSec	--	--	4
	TTL(0.4V $\Leftrightarrow$ 2.4V)	nSec	--	--	4
Fall Time	CMOS (20%Vdd $\Leftrightarrow$ 80%Vdd)	nSec	--	--	4
	TTL (0.4V $\Leftrightarrow$ 2.4V)	nSec	--	--	4
Output Voltage	CMOS	VOH	--	--	0.9*Vdd min.
		VOL	0.1*Vdd max.	--	--
	TTL	VOH	--	--	0.9*Vdd min.
		VOL	0.4*Vdd max.	--	--
Input (OE) Voltage	ASEP3 (CMOS)	VIH	--	--	0.7*Vdd min.
		VIL	0.2*Vdd max.	--	--
	ASEP5 (CMOS and TTL)	VIH	--	--	2.0V min.
		VIL	0.8V max.	--	--
Start-Up time		ms	--	--	10
Output Disable Time		ns	--	--	100
Output Enable Time (OE)		ns	--	--	100
Output Enable Time (ST)		ms	--	--	10
Aging (First Year)		ppm	-5	--	5

For Small Quantities, Delivery Time is 1-5 days

OPTIONS & PART IDENTIFICATION:

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ASEP - Frequency- - - -

Supply Voltage	
3	3.3V±10%
5	5.0V±10%

Frequency	
XX.XXXMHz	

Temp. Range	
D	-10°C to +60°C
F	-30°C to +70°C
N	-30°C to +85°C
L	-40°C to +85°C

Frequency Stability Over Operating Temp.	
J	± 20 ppm
R	± 25 ppm
K	± 30 ppm
H	± 35 ppm
Z	± 100 ppm

Packaging	
Blank	Bulk
T	Tape and Reel

OE or Stand-By	
Blank	Output Enable
B	Stand-By



ASEP

3.2 X 2.5 X 1.05 mm



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Top view: Dimensions 1, 2, 3, 4. Pin 1 is at the bottom-left corner.

Side view: Metal lid, Ceramic, 0.1±.008 (2.5±0.2).

Bottom view: 0.126±.008 (3.2±0.2), 0.41max.±.006 (1.05±0.15), 0.05 (1.2), 0.026 (0.65), 0.035 (0.9).

Recommended land pattern: 0.055 (1.4), 0.05 (1.2), 0.075 (1.9), 0.1 (2.4).

Dimensions: mm

PIN	FUNCTION
1	OE or Stand-By
2	GND
3	Output
4	Vdd

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

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1	OE or Stand-By
2	GND
3	Output
4	V _{dd}

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

Technical drawings of a medical device component, showing dimensions in millimeters (mm).

Top View:

- Overall width: 8.0 ± 0.2
- Overall height: 3.5 ± 0.1
- Feeding (Pull) Direction: Indicated by an arrow pointing right.
- Pin 1: Located at the center of the component.
- Dimensions: 0.25 ± 0.05 , 1.75 ± 0.1 , 2.0 ± 0.05 , 4.0 ± 0.1 , 1.4 ± 0.1 , 2.7 ± 0.1 , 3.4 ± 0.1 , 5° MAX , $\phi 1.55$, $\phi 1.0$.

Side View:

- Overall height: 11.5 ± 0.2
- Overall width: 8.0 ± 0.2
- Dimensions: 11.8 ± 1 , $\phi 60.2$, 2.0 .

Cross-sectional View:

- Overall width: 11 ± 0.5
- Overall height: 2.5
- Angle: 120°
- Dimensions: 2.7 ± 0.1 , 5° MAX , $\phi 13.0 \pm 0.5$.

Assembly Diagram:

- Parts: Indicated by arrows pointing to the component.
- Lead Tape: Indicated by an arrow pointing to the tape.
- End of Tape (200mm min.): Indicated by an arrow pointing to the end of the tape.
- Blanket Pocket (200mm min.): Indicated by an arrow pointing to the pocket.
- Tape (200mm min.): Indicated by an arrow pointing to the tape.

Dimensions: mm