

2.5Vdc CMOS COMPATIBLE SMD CRYSTAL CLOCK OSCILLATOR



3.2 x 2.5 x 1.2mm

ASE2 SERIES



RoHS
Compliant

FEATURES:

- Compact and low in height at 1.2mm
- Low current consumption
2mA typ. for 19.2MHz
- Tri state function
- Suitable for RoHS reflow
- Tight stability option ± 20 ppm for -40 to $+85^{\circ}\text{C}$
- Seam sealed package assures high reliability

APPLICATIONS:

- CCD clock for VTR camera
- Equipment connected to PC or PC cards
- Wireless communication

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	0.625	-----	166	MHz	
Operating Temperature	-10	-----	+70	$^{\circ}\text{C}$	STD (See options)
Storage Temperature	-55	-----	+125	$^{\circ}\text{C}$	
Overall Frequency Stability	-100	-----	+100	ppm	See options
Supply Voltage (Vdd)	+2.375	2.5	+2.625	V	
Supply Current (Idd)	-----	2	8	mA	0.625 ~ 19.99 MHz
	-----	3	8		20 ~ 31.99 MHz
	-----	5	15		32 ~ 59.99 MHz
	-----	12	20		60 ~ 125.0 MHz
Symmetry @ 1/2Vdd	45	-----	55	%	0.625 ~ 89.999 MHz
	40	-----	60		90 ~ 125.0 MHz
Rise and Fall Time (Tr/Tf)	-----	3	5	ns	0.625 ~ 19.99 MHz
	-----	3	5		20 ~ 31.99 MHz
	-----	3	5		32 ~ 59.99 MHz
	-----	3	5		60 ~ 125.0 MHz
Output Load	-----	-----	15	pF	CMOS
Output Voltage (VOH)	0.9* Vdd	-----	-----	V	
Output Voltage (VOL)	-----	-----	0.1* Vdd	V	
Start-up Time	-----	0.6	3	ms	0.625 ~ 19.99 MHz
	-----	0.6	3		20 ~ 31.99 MHz
	-----	0.6	3		32 ~ 59.99 MHz
	-----	1.3	2		60 ~ 125.0 MHz
Tri-state function	"1" (VIH $\geq$ 0.7*Vdd) or Open: Oscillation; "0" (VIL<0.3*Vdd) : Hi Z				
RMS Jitter:	-----	2	5	ps	0.625 ~ 19.99 MHz
	-----	2	5		20 ~ 31.99 MHz
	-----	2	5		32 ~ 59.99 MHz
	-----	2	5		60 ~ 125.0 MHz
Aging at 25 $^{\circ}\text{C}$ (first year)	-5	-----	+5	ppm	
Stand-by Current:	-----	-----	10	μA	

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASE2 - MHz - - -

Frequency in MHz
e.g. 0.625MHz
24.576MHz
14.31818MHz
26.000MHz
200.000MHz

Operating Temp.
I: $0^{\circ}\text{C} \sim +50^{\circ}\text{C}$
D: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
E: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
F: $-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$
N: $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$
L: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Contact ABRACON for
wider temperature range.

Overall Freq. Stability
J(*): ± 20 ppm
R: ± 25 ppm
K: ± 30 ppm
H: ± 35 ppm
B: ± 40 ppm
C: ± 50 ppm

*: Temp options I, D, E,
and -10°C to $+70^{\circ}\text{C}$ only

Packaging
Blank: Bulk
T: 1000pcs/Reel

ABRACON IS
ISO9001:2008
CERTIFIED



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The image shows a square integrated circuit (IC) labeled 'ASE2' on the left. To its right is a pinout diagram for a 16-pin package. The pins are arranged in two rows of eight. The top row is labeled 1 through 8 from left to right, and the bottom row is labeled 9 through 16 from left to right. The pins are represented by small squares, with the top row pins being yellow and the bottom row pins being black.



3.2 x 2.5 x 1.2mm

Technical drawing of a rectangular component with dimensions in inches and millimeters.

Top View: A rectangle with corners labeled 1, 2, 3, and 4. A small circular feature is located near corner 1.

Side View: Shows the profile of the component. The total height is $0.098 \pm .008$ inches (2.5 ± 0.2 mm). The thickness of the component is 0.047 max. inches (1.2 mm).

Bottom View: Shows the underside of the component. The overall width is 0.039 inches (1.0 mm). The distance between the two central rectangular features is 0.036 inches (0.9 mm). The distance between the two outer rectangular features is 0.047 inches (1.2 mm). The height of the central rectangular features is 0.0256 inches (0.65 mm).

2. Recommend using an approximately $0.01\mu\text{F}$ bypass capacitor between Pin 2 and 4.

PIN	FUNCTION
1	Tri-state
2	GND/Case
3	Output
4	Vdd

Dimensions: Inches (mm)

Dimensions: mm

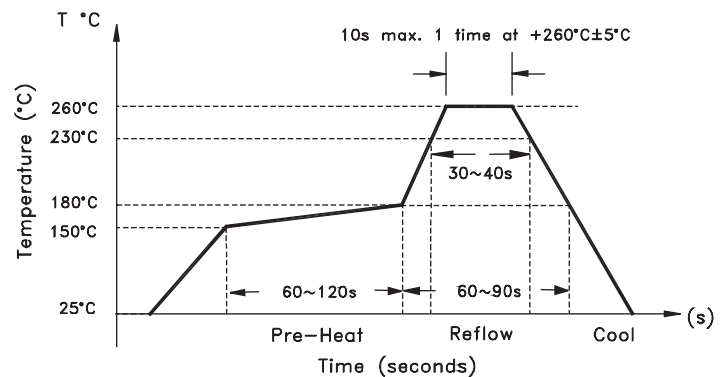
FEEDING (PULL) DIRECTION →

0.25±0.05 | 1.75±0.1 | Ø1.5 | 2.0±0.06 | 4.0±0.1 | 8.0±0.2

5° MAX | 3.6±0.1 | PIN1 | 3.5±0.1

1.25±0.1 | Ø1.0 | 4.0±0.1 | 2.9±0.1

Ø13.0±0.2 | 2±0.5 | 120° | 9.5±0.5 | 1.6±0.2 | Ø60 | Ø178±1 | Ø21±0.8



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