

# 3.3Vdc CMOS SMD CRYSTAL CLOCK OSCILLATOR

ASE SERIES



RoHS  
Compliant



3.2 x 2.5 x 1.0mm

## FEATURES:

- Compact and low in height
- Tri-state function
- Suitable for high density SMT
- IR reflow capable
- Tight stability option

## APPLICATIONS:

- CCD clock for VTR camera
- Equipment connected to PC or PC cards
- PDA, wireless communication.
- Laptop, SSD (Solid State Drive)

## STANDARD SPECIFICATIONS:

PARAMETERS	
ABRACON P/N	ASE Series
Frequency Range	0.625 ~ 200 MHz
Operating Temperature	-10°C to + 70°C (See Options)
Storage Temperature	- 55° C to + 125° C
Overall Frequency Stability	± 100 ppm max. (see options)
Supply Voltage (Vdd)	3.3 V ± 5%
Input Current	See Table 1
Symmetry	45/55% @ 50%Vdd
Rise and Fall Time (Tr/Tf)	See Table 1
Output Load	15 pF max
Start-up time:	See Table 1
Output Voltage	VOH = 0.9* Vdd min. VOL = 0.1* Vdd max.
Tristate Function	"1" (VIH >= 0.7* Vdd) or open: Oscillation "0" (VIL < 0.3 Vdd) : Hi Z
Peak to Peak Jitter	28ps (Typical) **
RMS Jitter	See Table 1
Stand-By Current	10 µA max.
Aging (first year):	±3 ppm max.

\*\* = Reference only; Contact Abracon for Jitter values

TABLE 1

Frequency (MHz)	Idd mA (Typ)	Idd mA (Max)	Tr/Tf ns (Typ)	Tr/Tf ns (max)	Start-up time ms (Typ)	Start-up time ms (Max)	RMS Jitter ps (Typ)	RMS Jitter ps (Max)
0.5 ~ 20	2.5	7	2.5	4.0	1	2.0	3.2	5
20.01 ~ 40.0	4.4	13	2.4	4.0	1	2.0	3.2	5
40.01 ~ 60.0	6.5	19	2.4	4.0	1	2.0	3.2	5
60.01 ~ 75.0	12.7	24	2.3	4.0	1	2.0	3.2	5
75.01 ~ 133.0	7.4	15	1.5	4.0	1.2	2.0	2.2	5
133.01 ~ 200.0	11.7	20	1.9	4.0	1.5	2.0	2.2	5

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASE - Frequency - □ - □ - □

Operating Temp.	
I	0°C to +50°C
D	-10°C to +60°C
E	-20°C to +70°C
F	-30°C to +70°C
N	-30°C to +85°C
L	-40°C to +85°C

Contact ABRACON for wider temperature range.

Overall Frequency	
J(*)	±20ppm
R	±25ppm
K	±30ppm
H	±35ppm
B	±40ppm
C	±50ppm

\* Temp options I, D, E and -10° C to + 70° C only

Packaging	
Blank	Bulk
T	Tape and Reel

ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED



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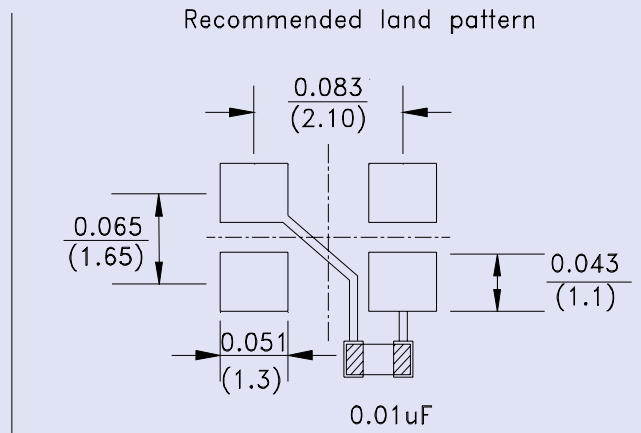
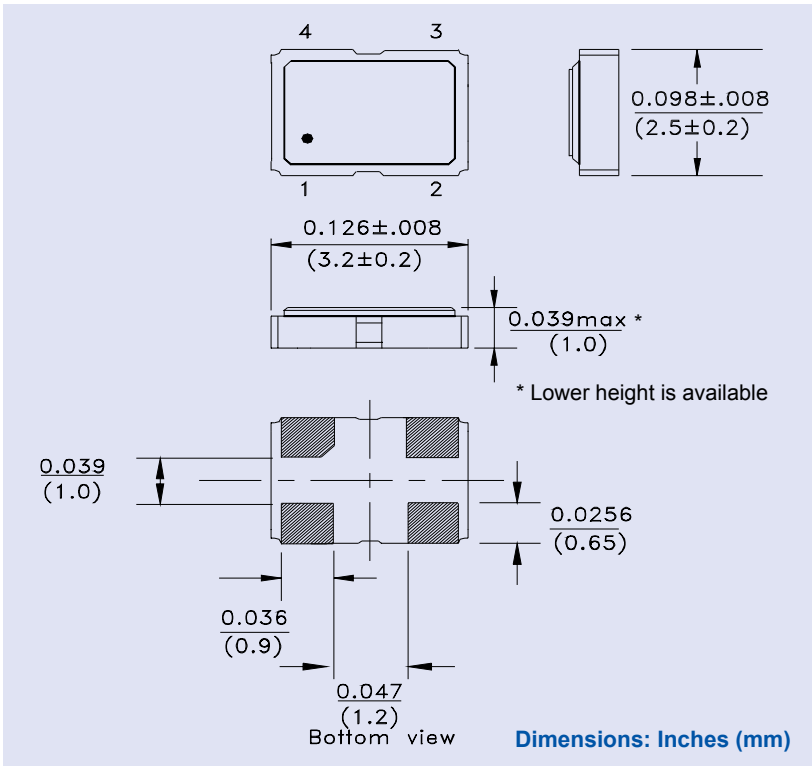
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## OUTLINE DRAWING:

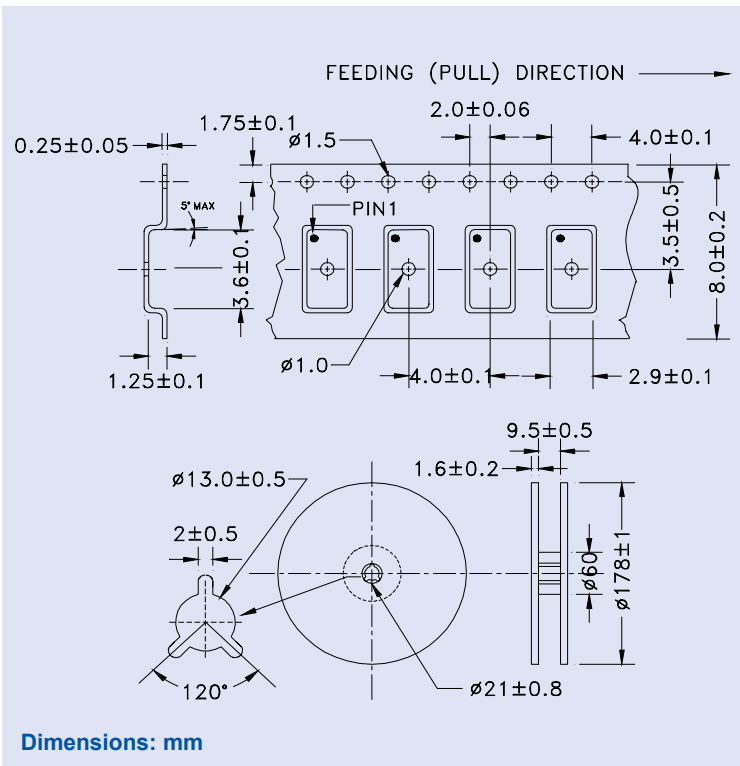


It is recommended to use an approximately 0.01uF bypass capacitor between PIN 2 and PIN 4.

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

**Note:** The outline package configuration varies with frequency range. Electrical properties, pin configuration, and land pattern are the same.

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



## REFLOW PROFILE

