

# 3.3Vdc HCMOS/SMD CRYSTAL CLOCK OSCILLATOR



7.0 x 5.0 x 1.8mm

ASV SERIES



RoHS  
Compliant

## FEATURES:

- HCMOS/Compatible, 3.3Vdc, 2.5Vdc, & 1.8Vdc options
- Suitable for RoHS reflow
- Seam sealed package assures high reliability
- High output drive capability (up to 50pF)

## APPLICATIONS:

- Clock signaling for  $\mu$ Processors, PC Motherboards & Graphic Cards

## STANDARD SPECIFICATIONS:

### PARAMETERS

ABRACON P/N	ASV Series
Frequency Range	0.312MHz to 165 MHz *
Operating Temperature	-10° C to +70° C (see options)
Storage Temperature	-55° C to +125° C
Overall Frequency Stability	$\pm 100$ ppm max. (see options)
Supply Voltage (Vdd)	3.3 Vdc $\pm 10\%$ (see options)
Input Current	See Table 1
Symmetry	40/60 % max. @ 1/2Vdd (see options)
Rise time / Fall time (Tr/Tf)	See Table 1
Output Load	15pF (10TTL) (see options)
Output Voltage	VOH = 0.9 * Vdd min.; VOL = 0.4 Vdc max.
Start-up Time	See Table 1
Tristate Function (see Tri-state option)	"1" (VIH $\geq 0.7$ *Vdd) or open: Oscillation "0" (VIL < 0.3*Vdd) : Hi Z
Disable Current (with Power Down)	10 $\mu$ A max.
Disable Current (without Power Down)	200 $\mu$ A (Option A)
Enable Time (with Power Down)	3.5ms Typ, 5ms max.
Enable Time (without Power Down)	100ns (Option A)
Disable Time (with Power Down)	100ns max.
Disable Time (without Power Down)	100ns max. (Option A)
Aging at 25°C (firstyear) :	$\pm 5$ ppm max.
Period Jitter one sigma	See Table 1

Table 1 (Typical value is for only reference.)

Frequency (MHz)	I <sub>dd</sub> (Typ) (mA)	I <sub>dd</sub> (Max) (mA)	Tr/Tf (Typ) (ns)	Tr/Tf (max) (ns)	Start-up time (Typ) (ms)	Start-up time (Max) (ms)	Period Jitter RMS (Typical) (ps)
0.5-14.9	2.0	10.0	3.0	5.0	0.4	4.0	2.5
15.0-29.9	3.6	15.0	2.8	4.0	0.4	4.0	3.2
30.0-39.9	5.6	20.0	2.6	4.0	2.0	4.0	3.2
40.0-49.9	7.2	25.0	2.4	4.0	1.5	4.0	3.2
50.0-59.9	13.3	30.0	2.2	4.0	2.9	5.0	3.2
60.0-79.9	19.0	35.0	2.2	4.0	1.5	5.0	3.2
80.0-99.9	20.2	45.0	2.0	4.0	1.3	5.0	3.0
100.0-125.0	23.7	50.0	1.8	4.0	1.8	5.0	2.9
125.1-165.0	27.2	65.0	1.5	4.0	2.7	5.0	2.9

\* Contact Abracon for higher frequencies

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ASV -  -  MHz -    -  -  -

P/N and Vdd (V)
Blank: 3.3 $\pm$ 10%
25: 2.5 $\pm$ 10%
18: 1.8 $\pm$ 10%

Frequency in MHz
e.g. 0.312MHz
14.31818MHz
26.000MHz
200.000MHz

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

Freq. Stability
J: $\pm 20$ ppm(*)
R: $\pm 25$ ppm
K: $\pm 30$ ppm
H: $\pm 35$ ppm
C: $\pm 50$ ppm

(\*) Temp option I, D, E, and -10°C ~ +70°C only.

Output Load
Blank: 15pF
50: 50pF

Symmetry
Blank: 40/60% @1/2Vdd
S: 45/55% @1/2Vdd

Packaging
Blank: Bulk
T: Tape & Reel (1kpcs)
T5: Tape & Reel (500pcs)

Tri-state
Blank: Tri-state with PD
A: Tri-state

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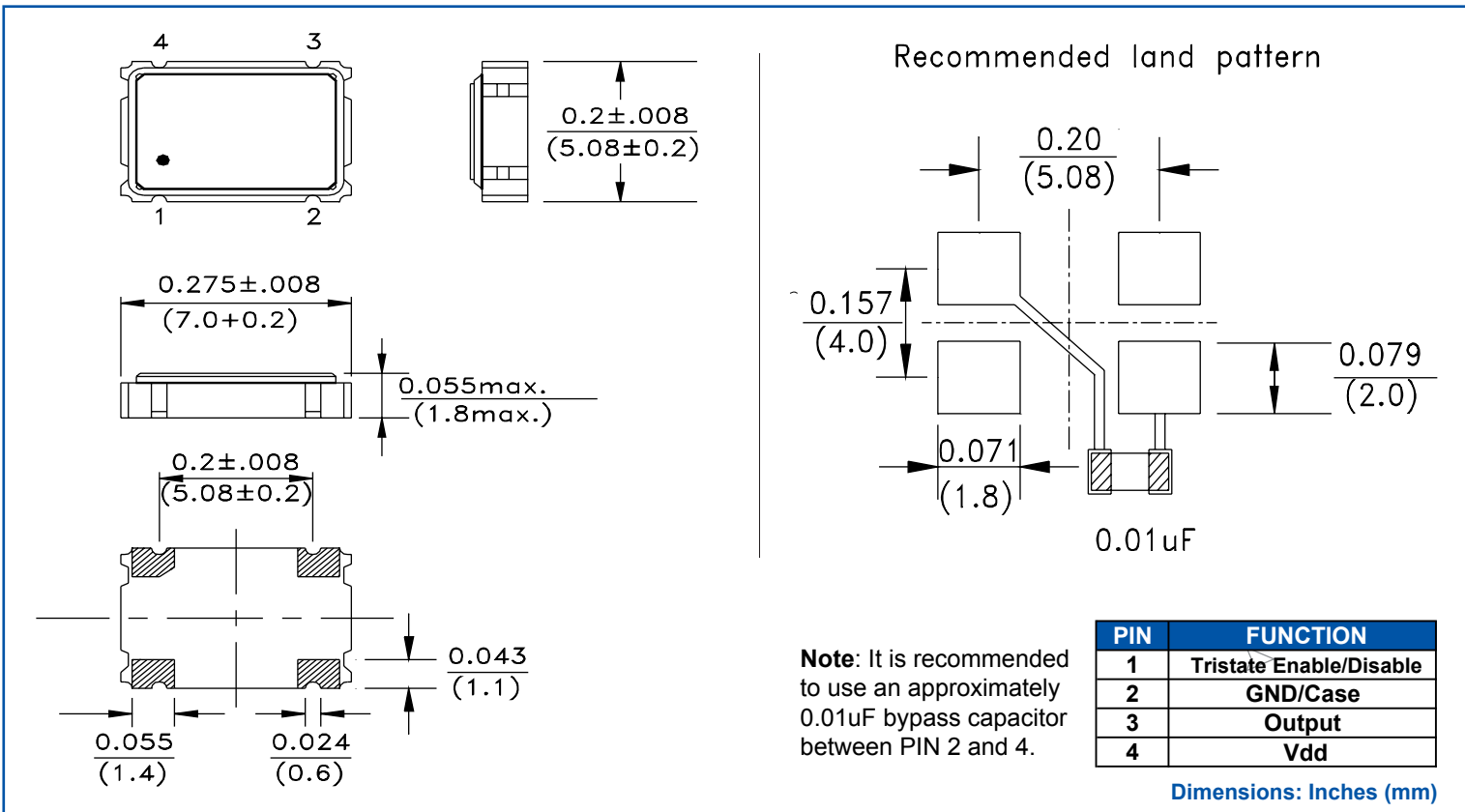
7.0 x 5.0 x 1.8mm

ASV SERIES

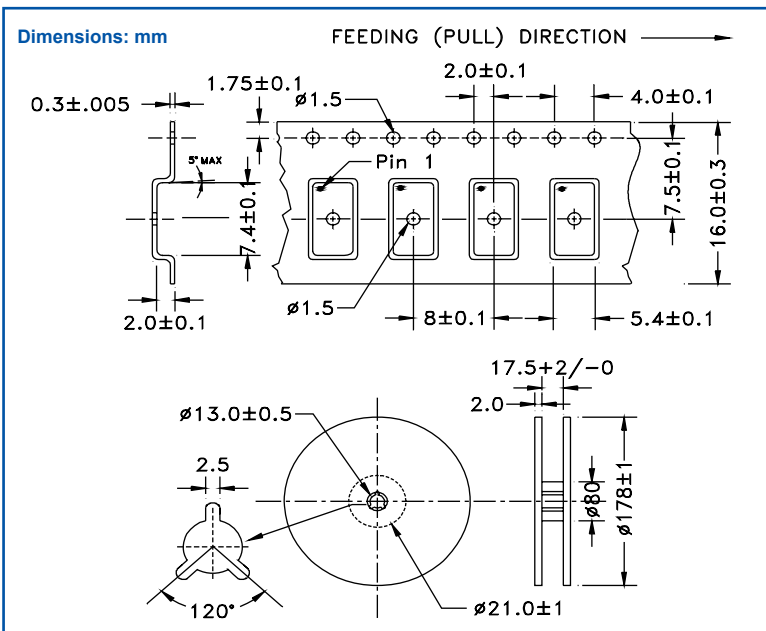


RoHS  
Compliant

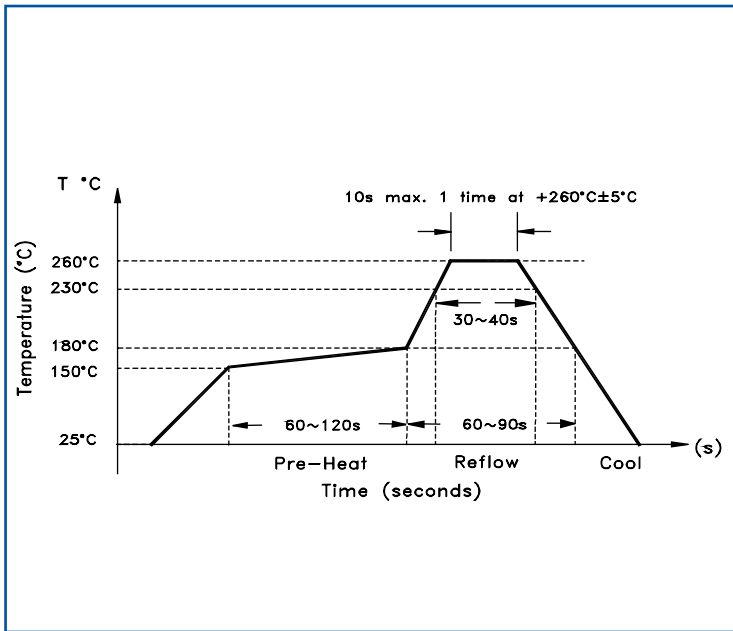
## OUTLINE DRAWING:



## TAPE & REEL: Tape and reel 1,000pcs/reel



## REFLOW PROFILE:



Need a test socket for the ASV Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, [click here](#).

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