3.3V CMOS SMD Crystal Oscillator

ASE SERIES



3.2 x 2.5 x 1.2mm

RoHS/RoHS II compliant

Moisture Sensitivity Level (MSL) –1

FEATURES:

- Low height 1.2mm max
- Tri-state function
- Low current consumption 30mA max for 200MHz
- Low RMS jitter 5ps max
- Suitable for RoHS reflow
- Available for 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	Minimum	Typical	Maximum	Units	Notes
Frequency Range	0.625		200	MHz	
Operating Temperature	-10		+70	°C	STD (See options)
Storage Temperature	-55		+125	°C	
Overall Frequency Stability	-100		+100	ppm	See options
Supply Voltage (Vdd)	+3.135	3.3	+3.465	V	
Supply Current (Idd)		2.5	7	mA	0.5 ~ 20 MHz
		4.4	13		20.1 ~ 40.0 MHz
		6.5	19		40.01 ~ 60.0 MHz
		12.7	24		60.01 ~ 75.0 MHz
		7.4	20		75.01 ~ 80.0 MHz
		7.4	25		80.01 ~ 133.0MHz
		11.7	30		133.01 ~ 200.0 MHz
Symmetry @ 1/2Vdd	45	50	55	%	0.5 ~ 80.0MHz
	40	50	60		80.01 ~ 200.0MHz
Rise and Fall Time (Tr/Tf)		2.5	4.0	ns	0.5 ~ 20 MHz
		2.4	4.0		20.1 ~ 40.0 MHz
		2.4	4.0		40.01 ~ 60.0 MHz
		2.3	4.0		60.01 ~ 75.0 MHz
		1.5	4.0		75.01 ~ 133.0 MHz
		1.9	4.0		133.01 ~ 200.0 MHz
Output Load			15	pF	CMOS
Output Voltage (VOH)	0.9* Vdd			V	
Output Voltage (VOL)			0.1* Vdd	V	
Start-up Time		1	2.0	ms	0.5 ~ 20 MHz
		1	2.0		20.1 ~ 40.0 MHz
		1	2.0		40.01 ~ 60.0 MHz
		1	2.0		60.01 ~ 75.0 MHz
		1.2	2.0		75.01 ~ 133.0 MHz
		1.5	2.0		133.01 ~ 200.0 MHz
Tri-state function (Stand-by)	"1" (VIH≥0.7*Vdd) or Open: Oscillation; "0" (VIL<0.3*Vdd) : No oscillation/Hi Z				
Peak to Peak Jitter		28		ps	Reference only. Contact ABRACON for the Jitter
RMS Jitter:		3.2	5	ps	0.5 ~ 20 MHz
		3.2	5		20.1 ~ 40.0 MHz
		3.2	5		40.01 ~ 60.0 MHz
		3.2	5		60.01 ~ 75.0 MHz
		2.2	5		75.01 ~ 133.0 MHz
		2.2	5		133.01 ~ 200.0 MHz
Aging at 25°C (first year)	-3		+3	ppm	
Stand-by Current:			10	µA	

www.datasheet.company

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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3.2 x 2.5 x 1.2mm

OPTIONS & PART IDENTIFICATION: (Left blank if standard)

ASE - [ ] MHz - [ ] - [ ] - [ ]

Frequency in MHz
e.g. 0.625MHz 24.576MHz 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

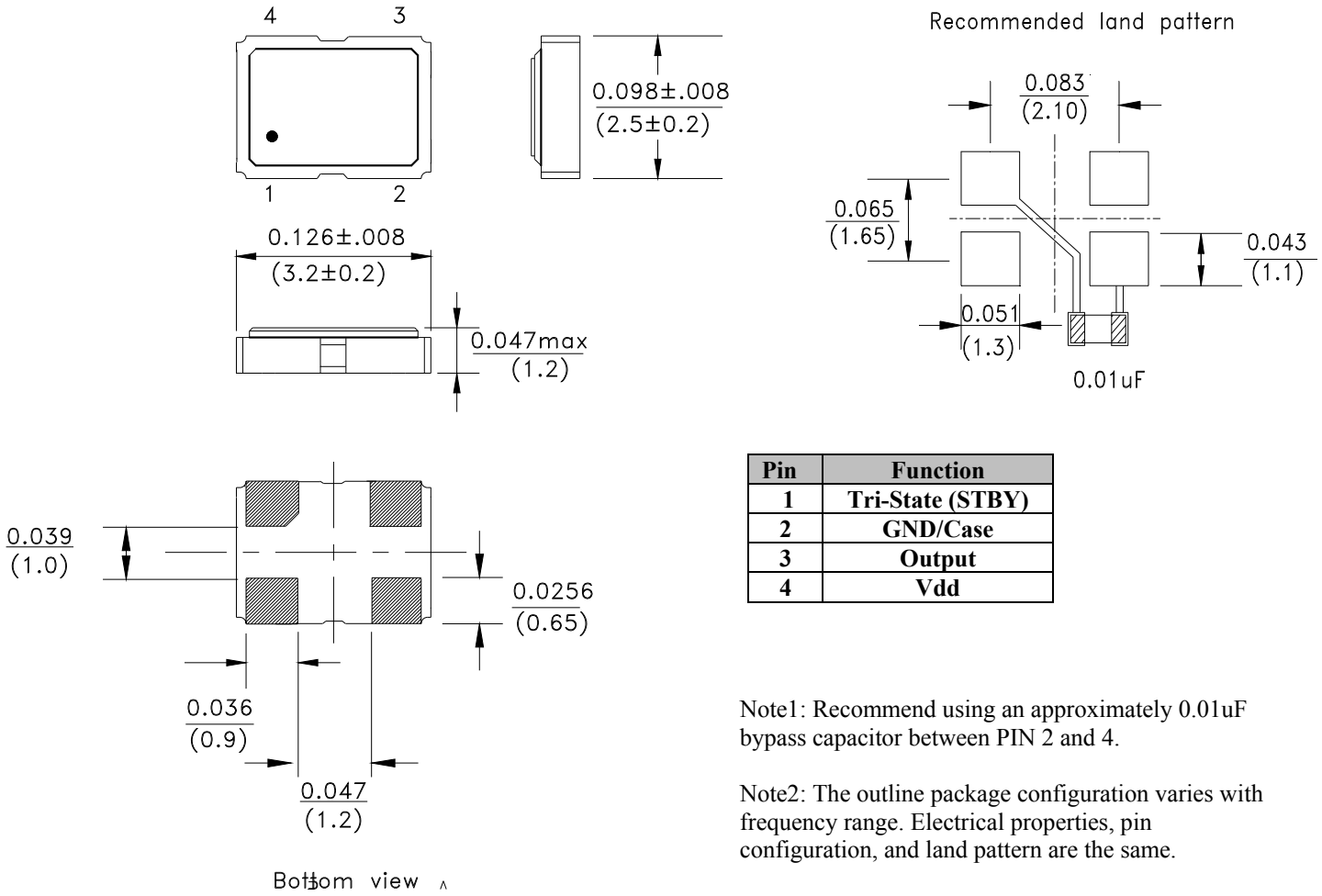
Contact ABRACON for wider temperature range.

Overall Freq. Stability
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: 1000pcs/Reel
T2: 250pcs/Reel
T3: 3000pcs/Reel

OUTLINE DIMENSIONS:



Pin	Function
1	Tri-State (STBY)
2	GND/Case
3	Output
4	Vdd

Note1: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

Note2: The outline package configuration varies with frequency range. Electrical properties, pin configuration, and land pattern are the same.

Dimensions: inches (mm)

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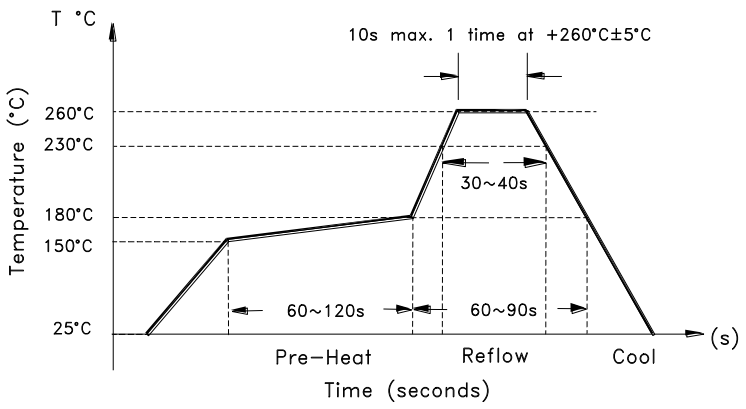
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RoHS/RoHS II compliant



3.2 x 2.5 x 1.2mm

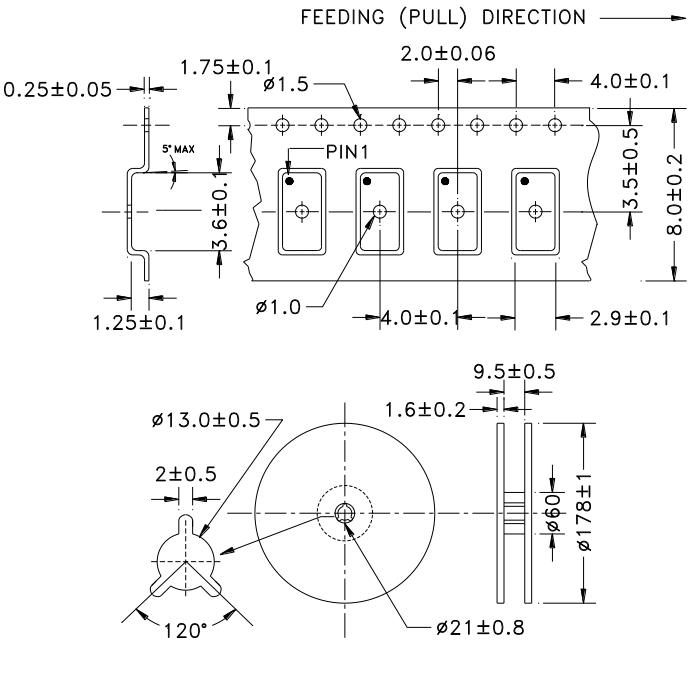
REFLOW PROFILE:



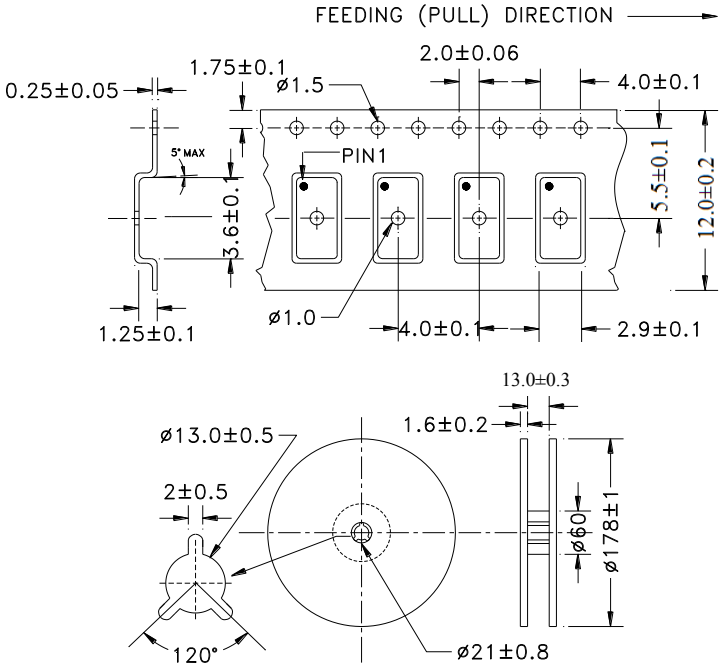
TAPE & REEL:

T: 1000pcs/reel
T2: 250pcs/reel
T3: 3000pcs/reel

8mm Tape Width



12mm Tape Width



Dimensions: mm



Need a test socket for the ASE Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** for these parts, **click here.**

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