

# 2.5V CMOS Compatible SMD Crystal Oscillator



3.2 x 2.5 x 1.2mm

## ASE2 SERIES



**ESD Sensitive**



**RoHS / RoHS II Compliant**

Moisture Sensitivity Level (MSL) -1

### 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  $\pm 20$ ppm for -40 to +85°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		156.25	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)	+2.375	2.5	+2.625	V	
Supply Current (Idd)		2	8	mA	0.625 ~ 19.99 MHz
		3	8		20.00 ~ 31.99 MHz
		5	15		32.00 ~ 59.99 MHz
		12	25		60.00 ~ 125.00 MHz
		15	25		125.01 ~ 156.25MHz
Symmetry @ 1/2Vdd	45		55	%	0.625 ~ 89.999 MHz
	40		60		90.00 ~ 156.25 MHz
Rise and Fall Time (Tr/Tf)		3	5	ns	0.625 ~ 19.99 MHz
		3	5		20.00 ~ 31.99 MHz
		3	5		32.00 ~ 59.99 MHz
		3	5		60.00 ~ 125.00 MHz
		3	5		125.01 ~ 156.25MHz
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		20.00 ~ 31.99 MHz
		0.6	3		32.00 ~ 59.99 MHz
		1.3	2		60.00 ~ 125.00 MHz
		1.3	2		125.01 ~ 156.25MHz
Tri-state function	"1" (VIH $\geq$ 0.7*Vdd) or Open: Oscillation; "0" (VIL<0.3*Vdd): Hi Z				
RMS Jitter:		2	5	ps	
Aging at 25°C (first year)	-5		+5	ppm	
Stand-by Current:			10	$\mu$ A	

### OPTIONS & PART IDENTIFICATION: (Left blank if standard)

ASE2 - [ ] MHz - [ ] - [ ] - [ ]

Frequency in MHz
e.g. 0.625MHz
24.576MHz
14.31818MHz
26.000MHz
156.25MHz

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(*): $\pm 20$ ppm
R: $\pm 25$ ppm
K: $\pm 30$ ppm
H: $\pm 35$ ppm
B: $\pm 40$ ppm
C: $\pm 50$ ppm

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

Packaging
Blank: Bulk
T: 1000pcs/Reel

ABRACON IS ISO9001:2008 CERTIFIED



**ABRACON CORPORATION**

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

Revised: 08.06.14

# 2.5V CMOS Compatible SMD Crystal Oscillator



3.2 x 2.5 x 1.2mm

ASE2 SERIES

RoHS / RoHS II Compliant

## OUTLINE DRAWING:

**Recommended land pattern**

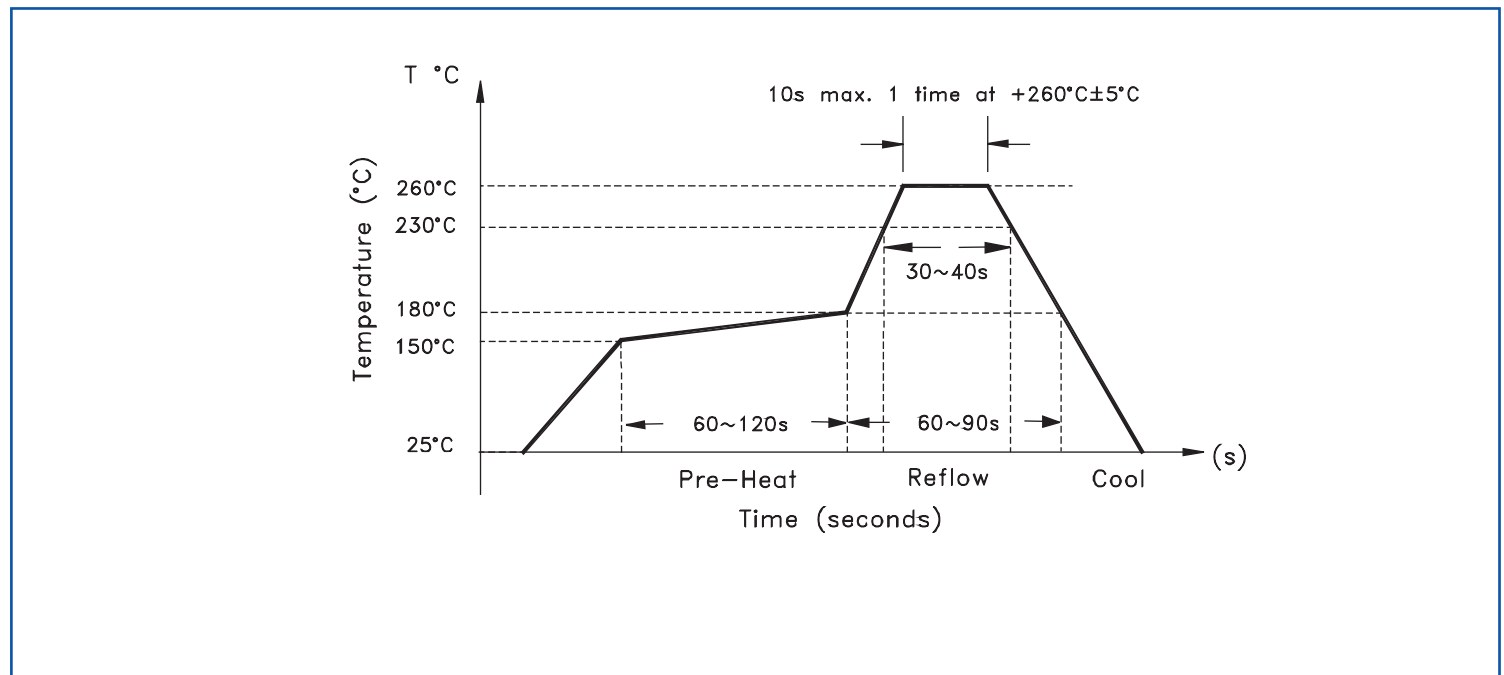
Note:

- The outline package configuration varies with frequency range. Electrical properties, pin configuration, and land pattern are the same.
- Recommend using an approximately 0.01μF bypass capacitor between Pin 2 and 4.

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

**Dimensions: Inches (mm)**

## REFLOW PROFILE



# 2.5V CMOS Compatible SMD Crystal Oscillator



3.2 x 2.5 x 1.2mm

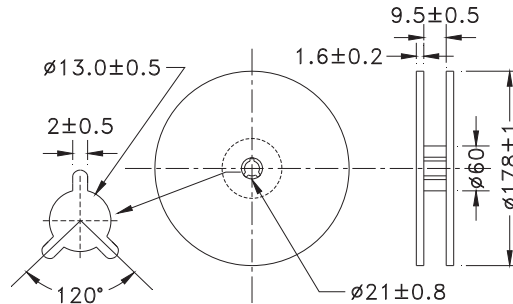
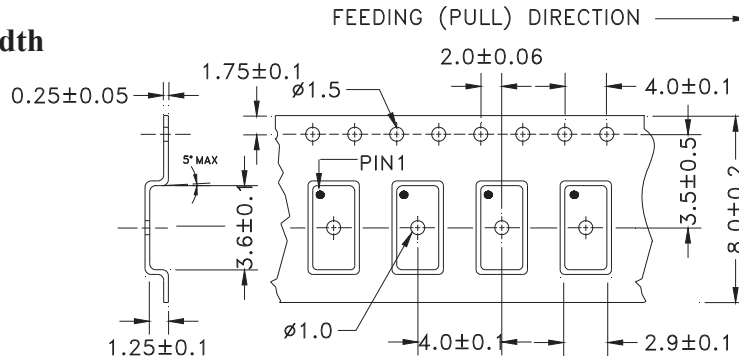
ASE2 SERIES

RoHS / RoHS II Compliant

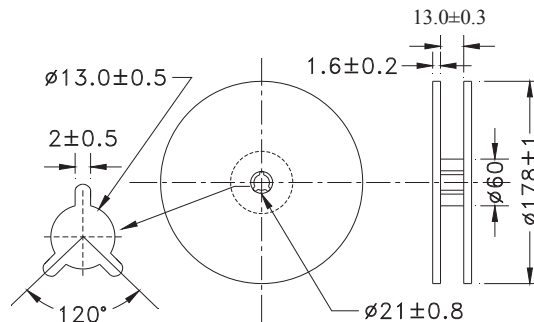
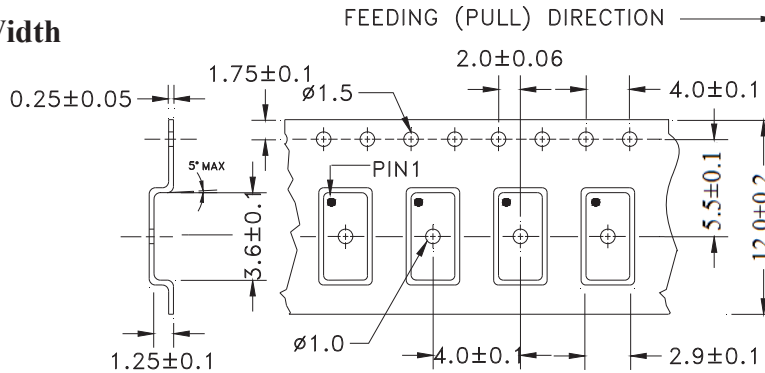
## TAPE & REEL:

T: 1000pcs/reel

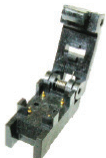
8mm Tape Width



12mm Tape Width



Dimensions: mm



Need a test socket for the ASE2 Series? To view compatible **PRECISION TEST & BURN-IN SOCKETS** or these parts, [click here](#).

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
ISO9001:2008  
CERTIFIED

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 08.06.14**  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## ABRACON:

[ASE2-12.000MHz-LC-T](#) [ASE2-14.31818MHz-LC-T](#) [ASE2-16.000MHz-LC-T](#) [ASE2-1.8432MHz-LC-T](#) [ASE2-24.576MHz-LC-T](#) [ASE2-40.000MHz-LC-T](#) [ASE2-66.6667MHz-LC-T](#) [ASE2-24.000MHz-LC-T](#) [ASE2-30.000MHz-LC-T](#) [ASE2-7.3728MHz-LC-T](#) [ASE2-33.333MHz-LC-T](#) [ASE2-13.000MHz-R](#) [ASE2-26.000MHz-R](#) [ASE2-14.7456MHz-LC-T](#) [ASE2-60.000MHz-LC-T](#) [ASE2-48.000MHz-LC-T](#) [ASE2-8.000MHz-LC-T](#) [ASE2-32.768MHz-LC-T](#) [ASE2-4.000MHz-LC-T](#) [ASE2-3.6864MHz-LC-T](#) [ASE2-32.000MHz-LC-T](#) [ASE2-10.000MHz-LC-T](#) [ASE2-25.000MHz-LC-T](#) [ASE2-50.000MHz-LC-T](#) [ASE2-64.000MHz-LC-T](#) [ASE2-20.000MHz-LC-T](#) [ASE2-18.432MHz-LC-T](#) [ASE2-33.000MHz-LC-T](#) [ASE2-27.000MHz-LC-T](#) [ASE2-11.0592MHz-LC-T](#) [ASE2-44.000MHz-LC-T](#) [ASE2-22.000MHz-LC-T](#) [ASE2-13.500MHz-LC-T](#) [ASE2-12.500MHz-ET](#) [ASE2-13.500MHz-ET](#) [ASE2-20.000MHz-ET](#) [ASE2-22.000MHz-ET](#) [ASE2-24.000MHz-ET](#) [ASE2-24.576MHz-ET](#) [ASE2-25.000MHz-ET](#) [ASE2-27.000MHz-ET](#) [ASE2-30.000MHz-ET](#) [ASE2-32.000MHz-ET](#) [ASE2-33.000MHz-ET](#) [ASE2-33.333MHz-ET](#) [ASE2-40.000MHz-ET](#) [ASE2-48.000MHz-ET](#) [ASE2-50.000MHz-ET](#) [ASE2-60.000MHz-ET](#) [ASE2-25.000MHz-L-C-T](#) [ASE2-32.000MHz-E-T](#) [ASE2-24.000MHz-E-T](#) [ASE2-50.000MHz-E-T](#) [ASE2-8.000MHz-L-C-T](#) [ASE2-30.000MHz-L-C-T](#) [ASE2-14.31818MHz-L-C-T](#) [ASE2-16.000MHz-L-C-T](#) [ASE2-4.000MHz-L-C-T](#) [ASE2-33.333MHz-L-C-T](#) [ASE2-66.6667MHz-L-C-T](#) [ASE2-44.000MHz-L-C-T](#) [ASE2-3.6864MHz-L-C-T](#) [ASE2-20.000MHz-E-T](#) [ASE2-13.500MHz-L-C-T](#) [ASE2-32.768MHz-L-C-T](#) [ASE2-12.000MHz-L-C-T](#) [ASE2-12.500MHz-E-T](#) [ASE2-13.500MHz-E-T](#) [ASE2-24.576MHz-L-C-T](#) [ASE2-11.0592MHz-L-C-T](#) [ASE2-22.000MHz-L-C-T](#) [ASE2-64.000MHz-L-C-T](#) [ASE2-60.000MHz-L-C-T](#) [ASE2-22.000MHz-E-T](#) [ASE2-24.576MHz-E-T](#) [ASE2-60.000MHz-E-T](#) [ASE2-33.000MHz-E-T](#) [ASE2-30.000MHz-E-T](#) [ASE2-27.000MHz-L-C-T](#) [ASE2-27.000MHz-E-T](#) [ASE2-40.000MHz-E-T](#) [ASE2-18.432MHz-L-C-T](#) [ASE2-33.000MHz-L-C-T](#) [ASE2-7.3728MHz-L-C-T](#) [ASE2-33.333MHz-E-T](#) [ASE2-25.000MHz-E-T](#) [ASE2-48.000MHz-L-C-T](#) [ASE2-48.000MHz-E-T](#) [ASE2-24.000MHz-L-C-T](#) [ASE2-10.000MHz-L-C-T](#) [ASE2-32.000MHz-L-C-T](#) [ASE2-1.8432MHz-L-C-T](#) [ASE2-20.000MHz-L-C-T](#) [ASE2-40.000MHz-L-C-T](#) [ASE2-14.7456MHz-L-C-T](#) [ASE2-50.000MHz-L-C-T](#) [ASE2-25.000MHz-IC-T](#) [ASE2-12.2727MHz-LC-T](#) [ASE2-74.250MHz-LR-T](#)