

HCMOS SURFACE-MOUNT CRYSTAL CLOCK OSCILLATOR

ASA SERIES

Moisture Sensitivity Level (MSL) – This product is
Hermetically Sealed and not Moisture Sensitive -
MSL = N/A: Not Applicable



RoHS
Compliant



2.0 x 1.6 x 0.7mm

FEATURES:

- Ultra miniature package, 2.0 x 1.6 x 0.7mm
- Tri-state function
- Suitable for high density SMT
- Suitable for RoHS compliant reflow process
- Seam sealed package assures high reliability

APPLICATIONS:

- CCD clock for VTR camera
- Computers and peripherals
- Portable electronics
- Mobile communication, PDA

STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes		
Frequency Range		1.0	----	80	MHz			
Operating Temperature		-10	----	+60	°C	See options		
Storage Temperature		-40	----	+85	°C			
Overall Frequency Stability*		-50	----	+50	ppm	See options		
Supply Voltage (Vdd)		2.97	3.3	3.66	V	Standard		
		2.25	2.5	2.75		Option 1 (CMOS)		
		1.62	1.8	1.98		Option 2 (CMOS)		
Supply Current (I _{dd})	Vdd = 3.3 V	-----	2.0	5.0	mA	1MHz ≤ F ≤ 20 MHz		
		-----	4.0	10.0		20 MHz < F ≤ 50 MHz		
		-----	7.0	15.0		50 MHz < F ≤ 80 MHz		
	Vdd = 2.5 V	-----	2.0	5.0		1MHz ≤ F ≤ 20 MHz		
		-----	3.0	10.0		20 MHz < F ≤ 50 MHz		
		-----	5.0	10.0		50 MHz < F ≤ 80 MHz		
	Vdd = 1.8 V	-----	1.5	5.0		1MHz ≤ F ≤ 20 MHz		
		-----	2.5	5.0		20 MHz < F ≤ 50 MHz		
		-----	4.0	10.0		50 MHz < F ≤ 80 MHz		
	Output Load		-----	-----		15	pF	
			-----	-----		2	TTL	
	Output Voltage	V _{OH}	0.9*Vdd	-----		-----	V	CMOS
V _{OL}		-----	-----	0.1*Vdd	CMOS			
V _{OH}		2.4	-----	-----	TTL			
V _{OL}		-----	-----	0.4	TTL			
Tri-state function		"1" (VIH≥0.7*Vdd) : Oscillation "0" (VIH<0.3*Vdd) : Hi Z				Pin 1 must be pulled “high” for oscillation		
Aging		-3.0	-----	+3.0	ppm	@+25°C First year		
Symmetry @1/2Vdd		40	50	60	%	Standard		
		45	50	55		Option S		
Start-up Time				10.0	ms			
Rise/Fall Time (Tr/Tf)				10.0	ns			

*Overall frequency stability includes initial frequency tolerance @+25°C and stability over the operating temperature.

OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

ASA - MHz - - - -

Supply Voltage
Blank: 3.3V±10%
1: 2.5 V±10%
2: 1.8 V±10%

Packaging
Blank: Bulk
T: Tape & Reel (1kpcs)
T3: Tape & Reel (3kpcs)

Frequency in MHz
Please specify the frequency in MHz. e.g. 14.31818MHz

Operating Temp.
Blank: -10°C ~ +60°C
E: -20°C ~ +70°C
L: -40°C ~ +85°C

Overall Freq. Stability
Blank: ±50ppm
R**: ±25ppm
K***: ±30 ppm

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

**Available for -10 to +60°C only

***Available for -10 to +60°C, option E only

Contact Abracon for tighter frequency stability options

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30332 Esperanza, Rancho Santa Margarita, California 92688

tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

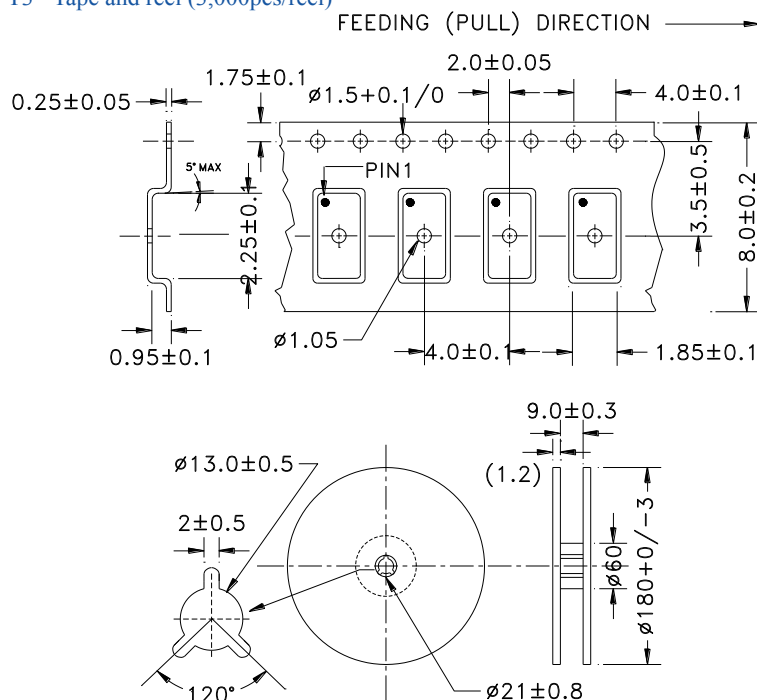


2.0 x 1.6 x 0.7mm

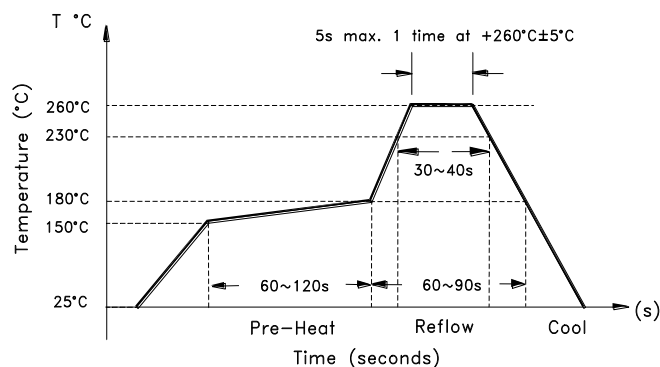
Figure 1: Dimensions of the test specimen. The figure shows three views of a rectangular specimen with rounded corners. The top view shows overall dimensions of 2.0 ± 0.1 inches (4 segments of 0.079 ± 0.004 inches each) and 1.6 ± 0.1 inches (4 segments of 0.063 ± 0.004 inches each). The side view shows a thickness of 0.028 ± 0.004 inches (0.7 ± 0.1 inches). The bottom view shows a central square area with side length 0.020 ± 0.004 inches (0.5 ± 0.1 inches) and a corner radius of 0.008 inches (0.2 inches). The bottom view also shows four corner segments, each 0.024 ± 0.004 inches (0.60 ± 0.1 inches) wide, and a central square area of 0.020 ± 0.004 inches (0.5 ± 0.1 inches) side length. The bottom view also shows a central square area of 0.020 ± 0.004 inches (0.5 ± 0.1 inches) side length and a corner radius of 0.008 inches (0.2 inches). The bottom view also shows a central square area of 0.020 ± 0.004 inches (0.5 ± 0.1 inches) side length and a corner radius of 0.008 inches (0.2 inches).

PIN #	Name
1	Tri-state (Stand-by)
2	GND
3	Output
4	Vdd

T= Tape and reel (1,000pcs/reel)
T3= Tape and reel (3,000pcs/reel)



REFLOW PROFILE:



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

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

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