

HCMOS SURFACE-MOUNT CRYSTAL CLOCK OSCILLATOR



2.0 x 1.6 x 0.7 mm

ASA SERIES

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

RoHS/RoHS II Compliant

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 (V _{dd})	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}) into 15pF Load	V _{dd} = 3.3 V		2.0	mA	1MHz ≤ F ≤ 20 MHz
			4.0		20 MHz < F ≤ 50 MHz
			7.0		50 MHz < F ≤ 80 MHz
	V _{dd} = 2.5 V		2.0		1MHz ≤ F ≤ 20 MHz
			3.0		20 MHz < F ≤ 50 MHz
			5.0		50 MHz < F ≤ 80 MHz
	V _{dd} = 1.8 V		1.5		1MHz ≤ F ≤ 20 MHz
			2.5		20 MHz < F ≤ 50 MHz
			4.0		50 MHz < F ≤ 80 MHz
Output Load			15	pF	
			2	TTL	
Output Voltage	V _{OH}	0.9*V _{dd}		V	CMOS
	V _{OL}		0.1*V _{dd}		CMOS
	V _{OH}	2.4			TTL
	V _{OL}		0.4		TTL
Tri-state function	"1" (VIH ≥ 0.7*V _{dd}) or Open : Oscillation "0" (VIH < 0.3*V _{dd}) : Hi Z				
Aging	-3.0		+3.0	ppm	@+25°C First year
Symmetry @1/2V _{dd}	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% @1/2V _{dd}
S: 45/55% @1/2V _{dd}

**Available for -10 to +60°C only

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

Contact Abracon for tighter frequency stability options

ABRACON IS
ISO9001:2008
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale **Revised: 01.24.14**

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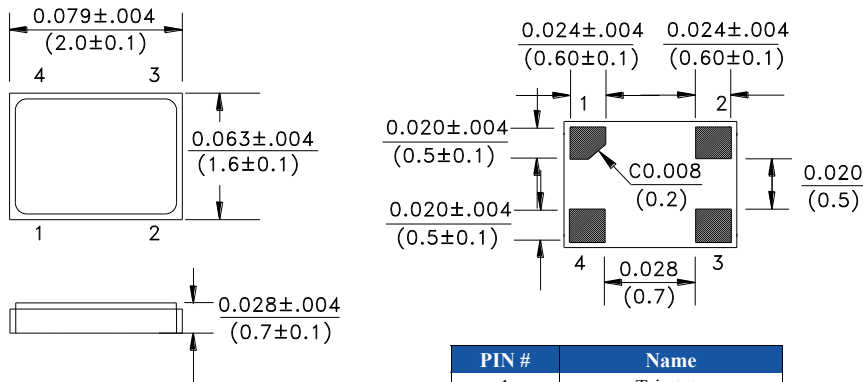
ASA

2.0 x 1.6 x 0.7mm

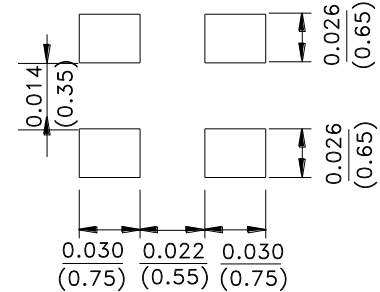
ASA SERIES

RoHS/RoHS II Compliant

OUTLINE DRAWING:



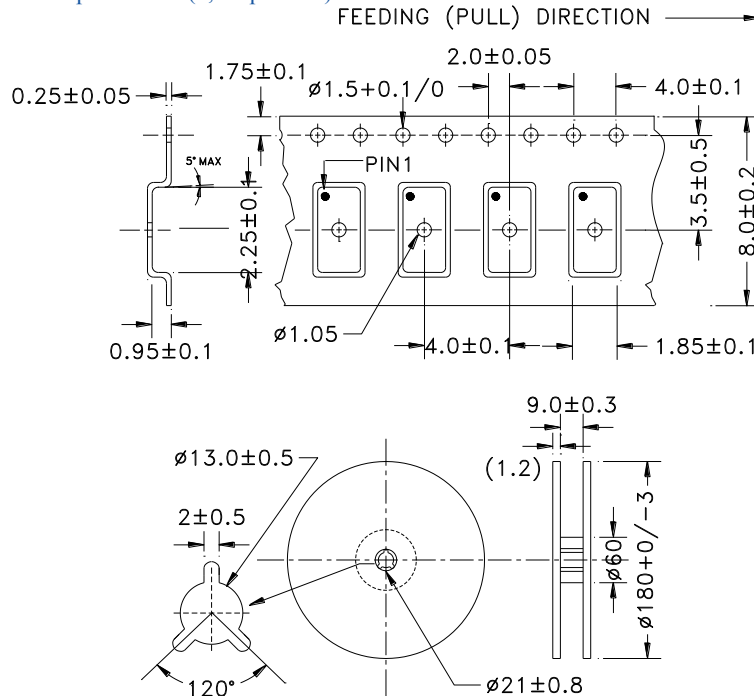
Recommended land pattern



PIN #	Name
1	Tri-state
2	GND
3	Output
4	Vdd

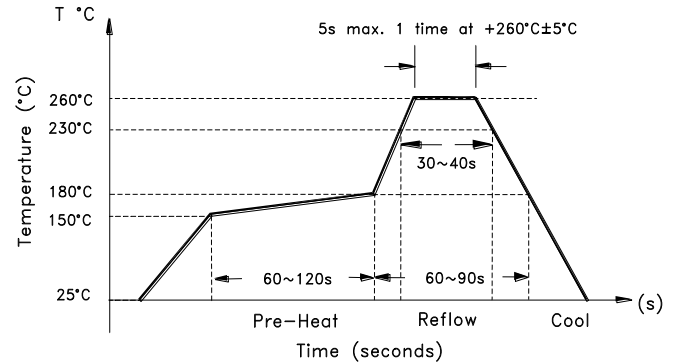
TAPE & REEL:

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



Dimensions: mm

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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