Ultra Miniature SMD Crystal Clock Oscillator

1.6 x 1.2 x 0.7mm

ASCO

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:1.6 x 1.2 x 0.7mm
- Tri-state function
- Suitable for high density SMT
- Suitable for RoHS compliant reflow process
- Electrical beam sealed package assures extreme accuracy and 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	3.63	V	Standard
		2.25	2.5	2.75		Option "1"
		1.62	1.8	1.98		Option "2"
Supply Current (I_{dd}) into 15pF Load	Vdd = 3.3 V		3.0	4.5	mA	1MHz ≤ F ≤ 20 MHz
			4.2	6.0		20 MHz < F ≤ 50 MHz
			6.0	8.5		50 MHz < F ≤ 80 MHz
	Vdd = 2.5 V		2.5	3.5		1MHz ≤ F ≤ 20 MHz
			3.0	4.5		20 MHz < F ≤ 50 MHz
			4.0	6.0		50 MHz < F ≤ 80 MHz
	Vdd = 1.8 V		2.0	3.0		1MHz ≤ F ≤ 20 MHz
			2.5	3.5		20 MHz < F ≤ 50 MHz
			3.5	5.0		50 MHz < F ≤ 80 MHz
Output Load				15	pF	CMOS
Output Voltage	V_{OH}	0.9*Vdd			V	
	V_{OL}			0.1*Vdd		
Tri-state function		"1" (VIH≥0.7*Vdd) or Open : Oscillation "0" (VIH<0.3*Vdd) : Hi Z				
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				2.0	ms	
Rise/Fall Time (Tr/Tf)				5.0	ns	

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

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Pb RoHS/RoHS II compliant

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PART IDENTIFICATION:

ASCO□ - □ MHz - □ - □ - □ - □

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

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
N: -30°C ~ +85°C
L*: -40°C ~ +85°C

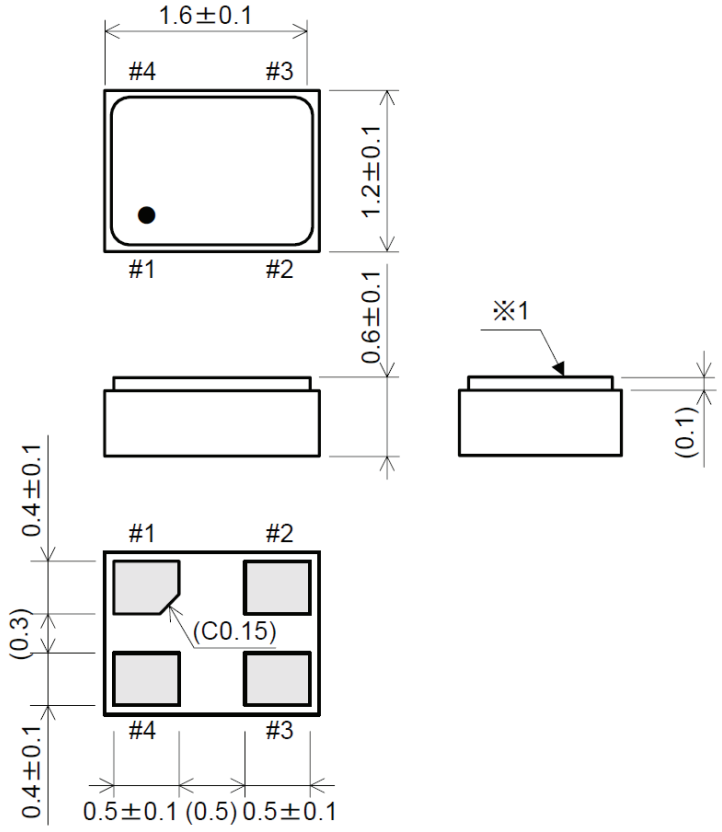
Overall Freq. Stability
Blank: ±50ppm
J**: ±20ppm
K: ±30 ppm
H: ±35 ppm
B: ±40 ppm

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

Packaging
Blank: Bulk
T3: 3000pcs/reel (Standard)
T: 1000pcs/reel (Special order. Available upon request)

* Only available with standard Freq. stability and option "B"
**Available for -10 to +60°C, option E only
Please contact Abracon for tighter frequency stability options

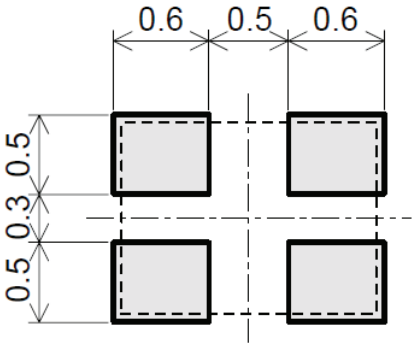
OUTLINE DRAWING:



Pin	Function
1	Tri-state
2	GND
3	Output
4	Vdd

Pin 2 is connected to the metal lid (※1).

Recommended Land Pattern



Dimensions: mm

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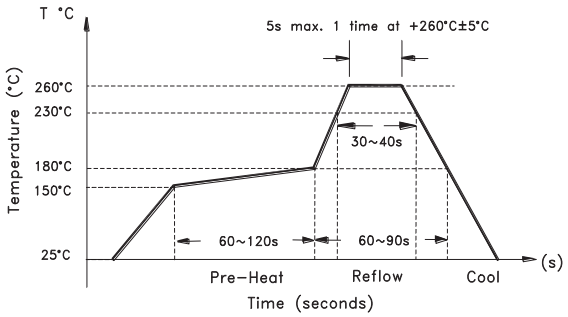
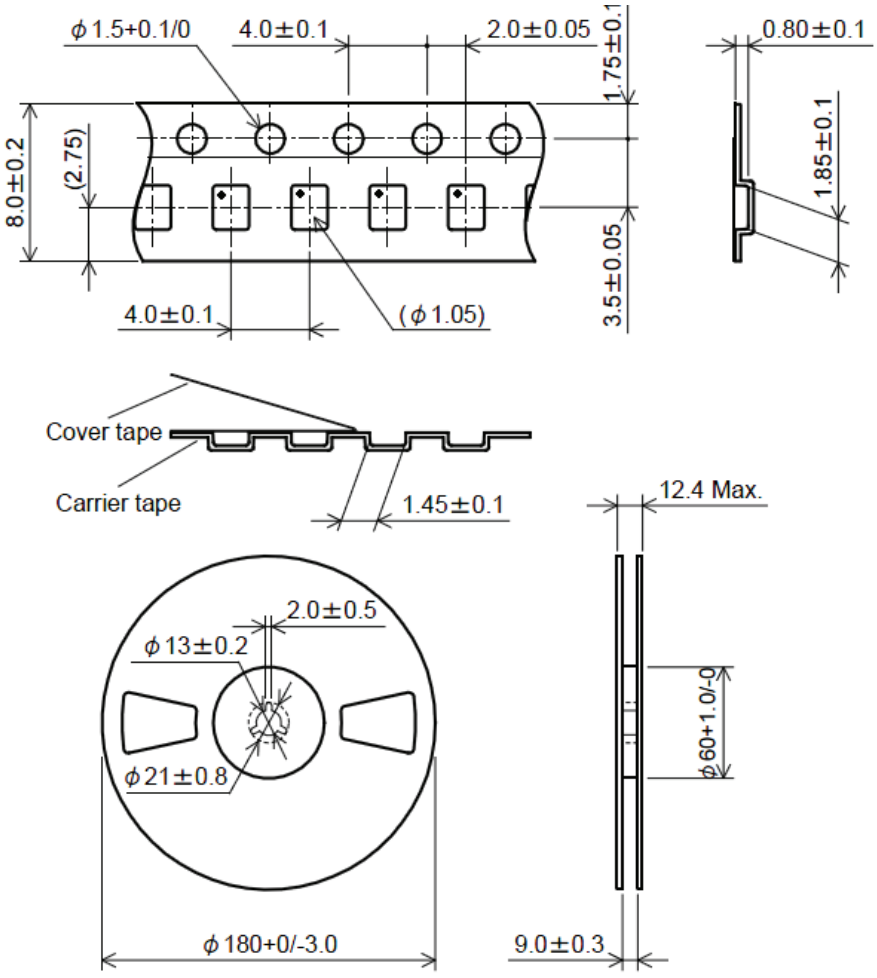
REFLOW PROFILE:



TAPE & REEL:

T3= 3,000pcs/reel (Standard)
T = 1,000pcs/reel (Special order. Available upon request)



Dimensions: mm

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