



**THE DATASHEET OF
ASCO-12.000MHZ-EK-T3**



Ultra Miniature SMD Crystal Clock Oscillator



ASCO

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

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*	7.0		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 (Idd) into 15pF Load	Vdd = 3.3 V		3.0	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
Standby Current (IST)		1.1	3.0	µA		
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		
RMS Phase Jitter			2.0	ps	(12kHz ~5MHz)	

* Please contact Abracon for frequency < 7MHz.

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

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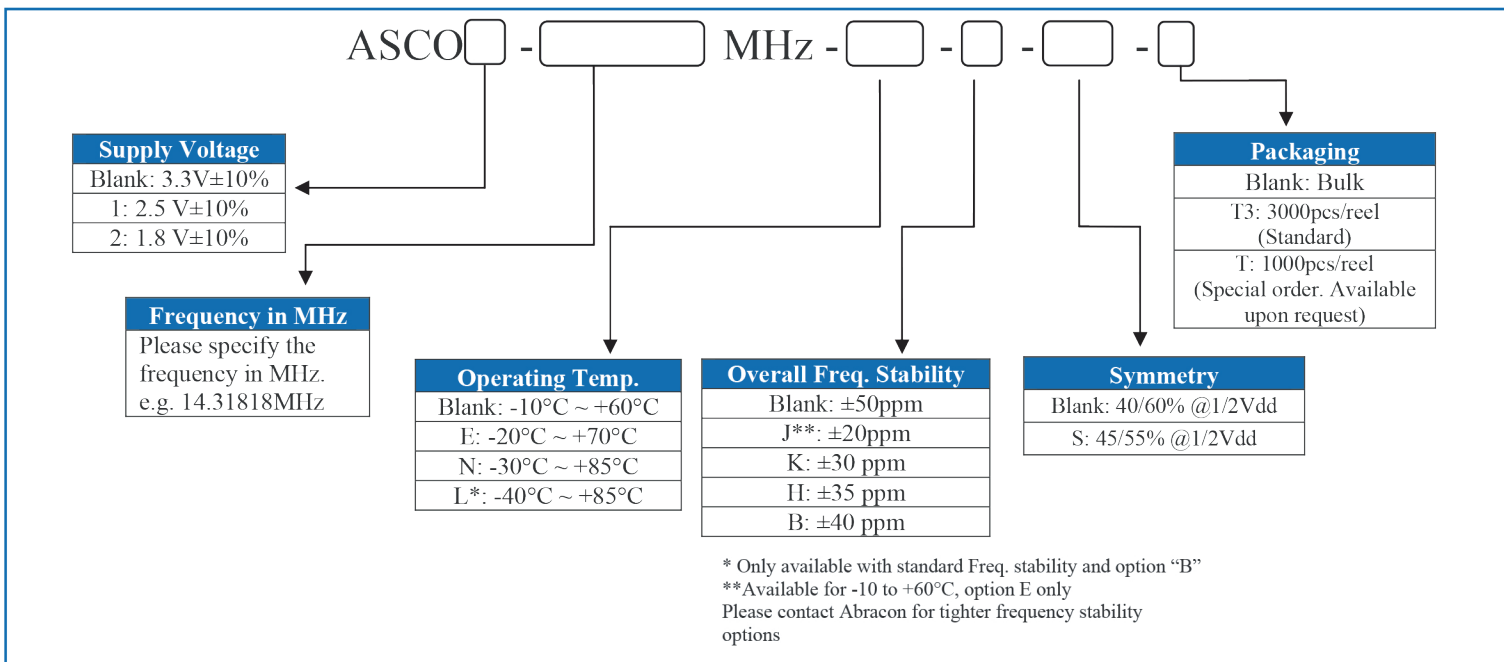
1.6 x 1.2 x 0.7mm

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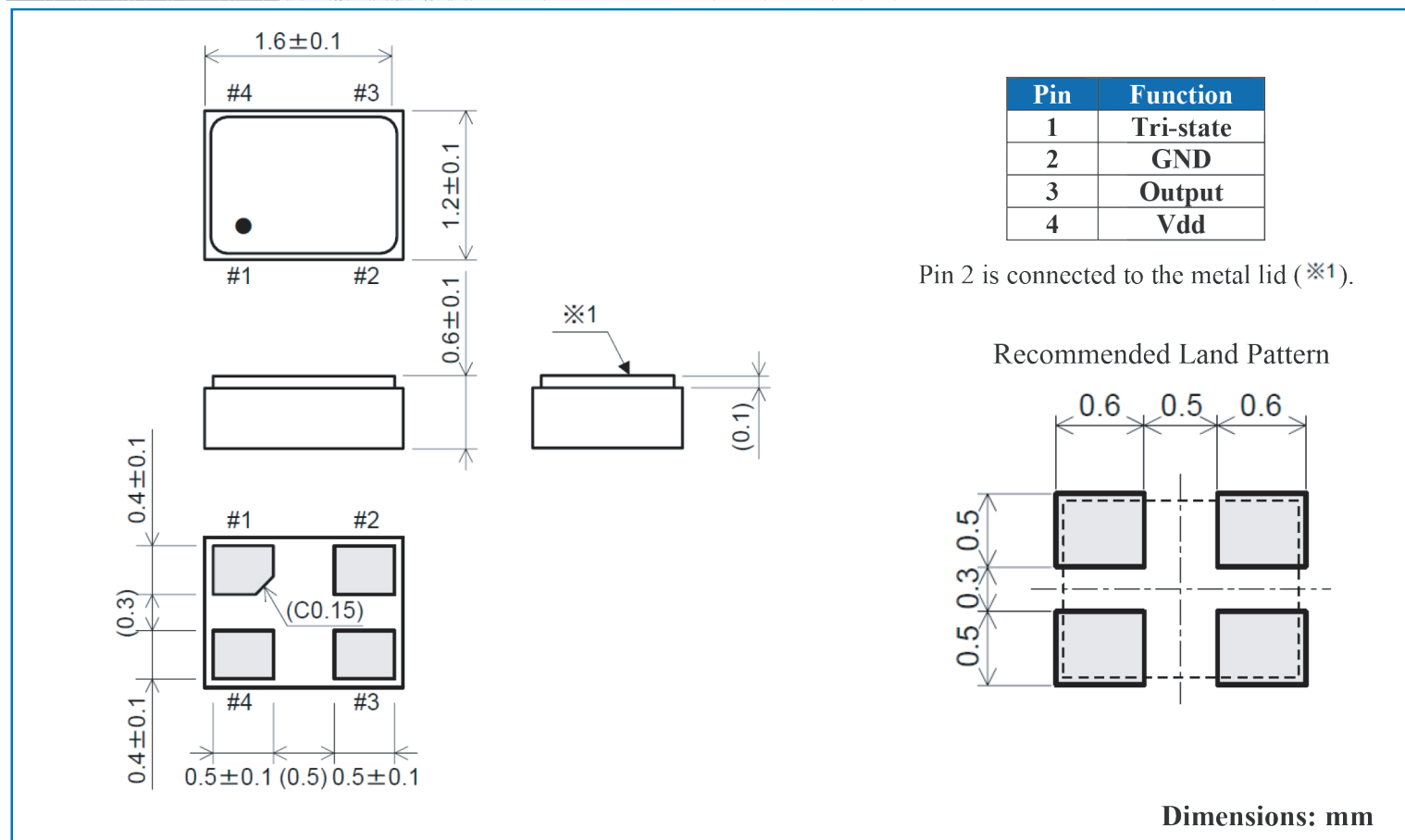


RoHS/RoHS II compliant

PART IDENTIFICATION:



OUTLINE DRAWING:



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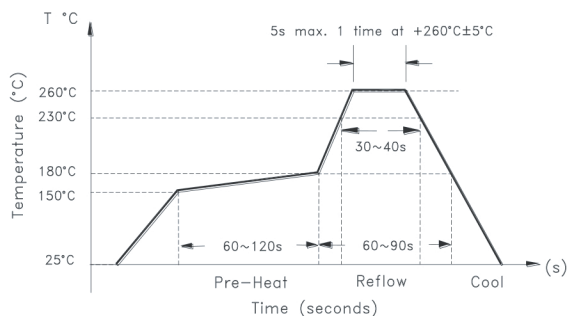
1.6 x 1.2 x 0.7mm

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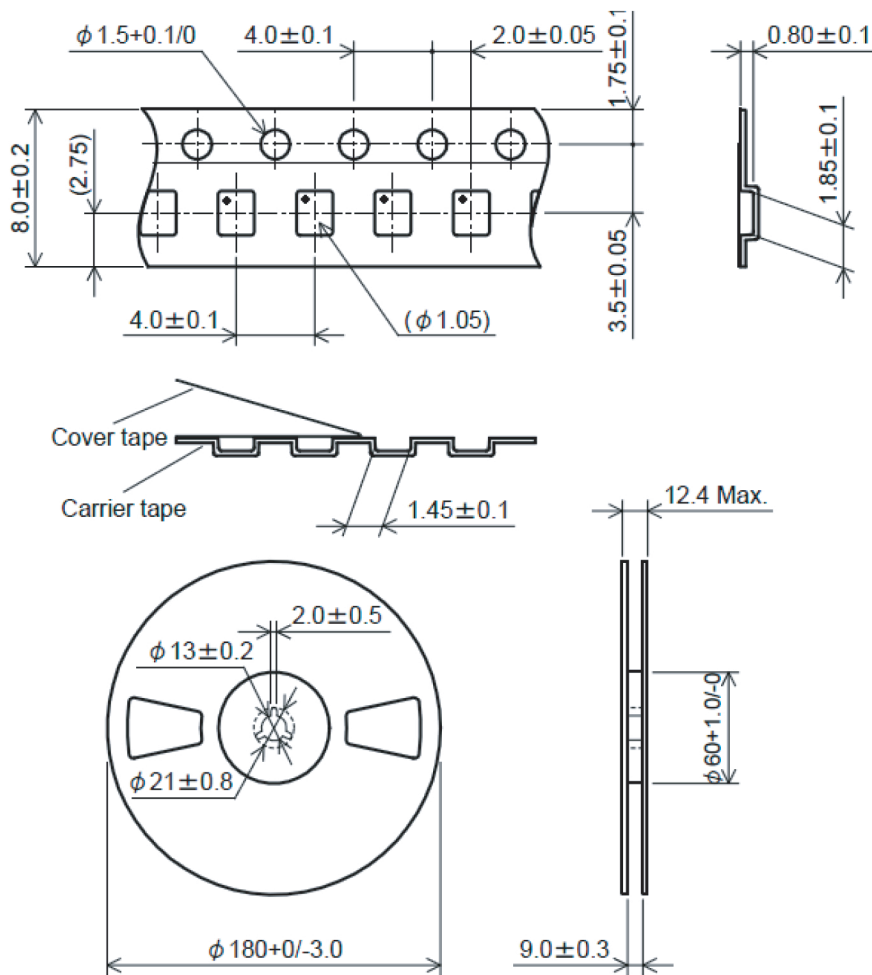
REFLOW PROFILE:



TAPE & REEL:

T3= 3,000pcs/reel (Standard)

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



Dimensions: mm

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- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management