IoT OPTIMIZED LOW PROFILE QUARTZ CRYSTAL

ABM10-166-12.00MHz

2.5 x 2.0 x 0.5 mm

RoHS/RoHS II Compliant

MSL = N/A: NOT APPLICABLE (See Note #1)

FEATURES

- Optimized for low power consumption, wearables, and IoT applications
- Guaranteed low 125Ω ESR ensures operation in power sensitive solutions
- 0.50mm max height ideally suited for height constrained designs
- Seam sealed for long-term reliability

APPLICATIONS

- Wearables
- Internet of Things (IoT)
- Bluetooth/Bluetooth Low Energy (BLE)
- Wireless modules
- Machine-to-machine (M2M) connectivity
- Ultra-low power MCU/modules
- USB

STANDARD SPECIFICATIONS

PARAMETERS	MINIMUM	TYPICAL	MAXIMUM	UNITS	NOTES
Frequency		12.000		MHz	
Operation Mode		Fundamental			
Operating Temperature	-20		+70	ºC	
Storage Temperature	-40		+125	ºC	
Frequency Tolerance @+25°C	-10		+10	ppm	See Note #2
Frequency Stability over the Operating Temperature (ref. to +25°C)	-10		+10	ppm	See Note #3
Equivalent series resistance (R1)			125	Ω	
Shunt capacitance (C0)			2	pF	
Load capacitance (CL)		8		pF	
Drive Level		10	100	µW	
Aging@25°C±3°C			±3	ppm	First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

Note#1: Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive

Note#2: Referenced to crystal resonant frequency, into an oscillator loop effective load of 8pF

Note#3: Referenced to the measured frequency at 25°C±3°C, into an oscillator loop effective load of 8pF

ABRACON® LLC
The Power of Linking Together

5101 Hidden Creek Lane Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sale visit:
www.abracon.com

ABRACON IS ISO9001-2008 CERTIFIED

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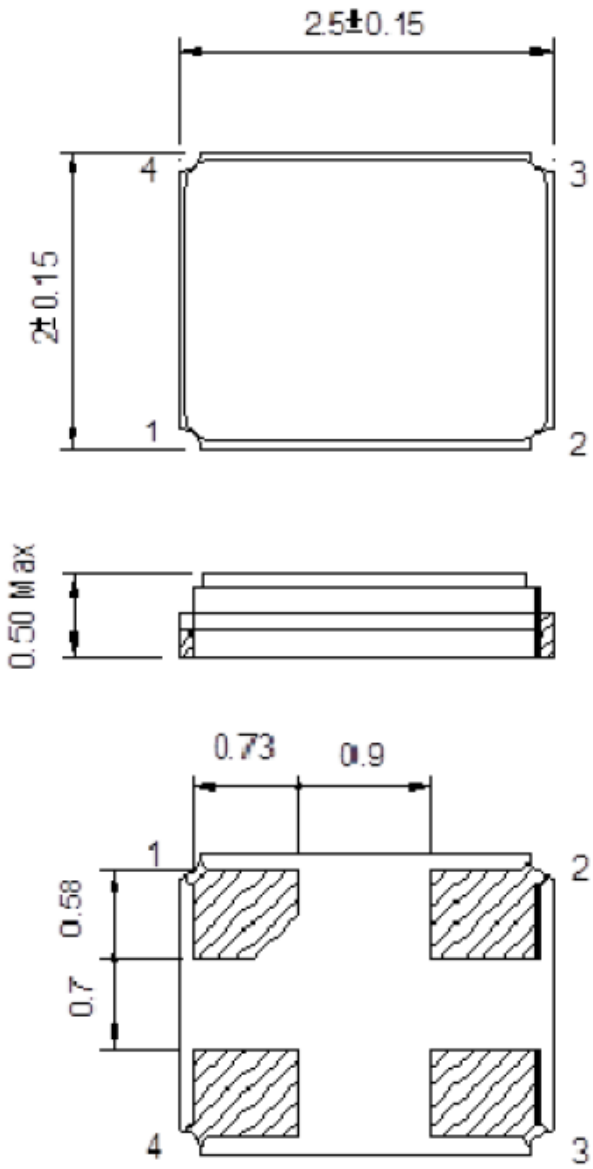
PART IDENTIFICATION AND ORDERING INFORMATION

ABM10-166-12.000MHz-▢

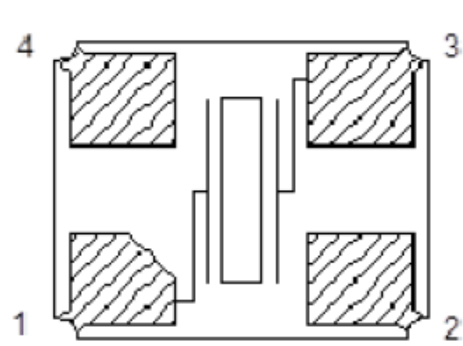
PACKAGING
Blank: Bulk
T3: 3K/Reel

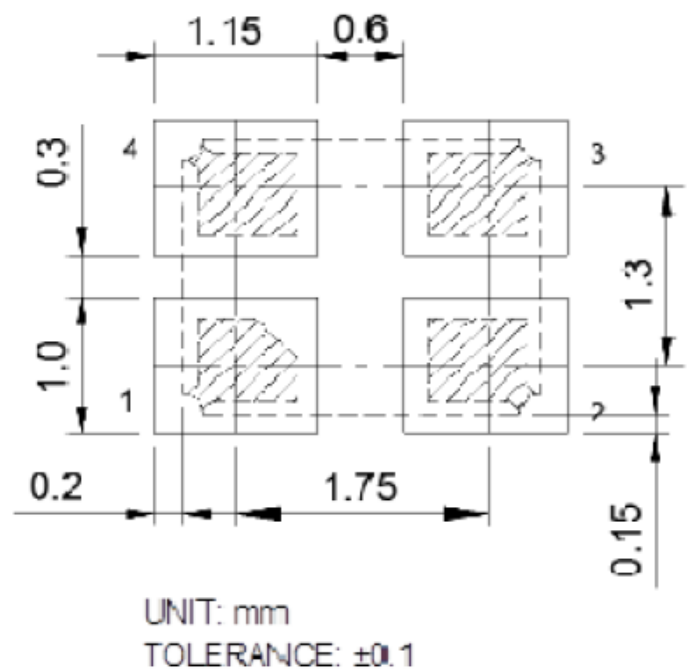
MECHANICAL DIMENSIONS (ALL DIMENSIONS ARE IN mm)



RECOMMENDED LAND PATTERN

<TOP VIEW>





UNIT: mm
TOLERANCE: ±0.1

REVISED: 06/21/2016

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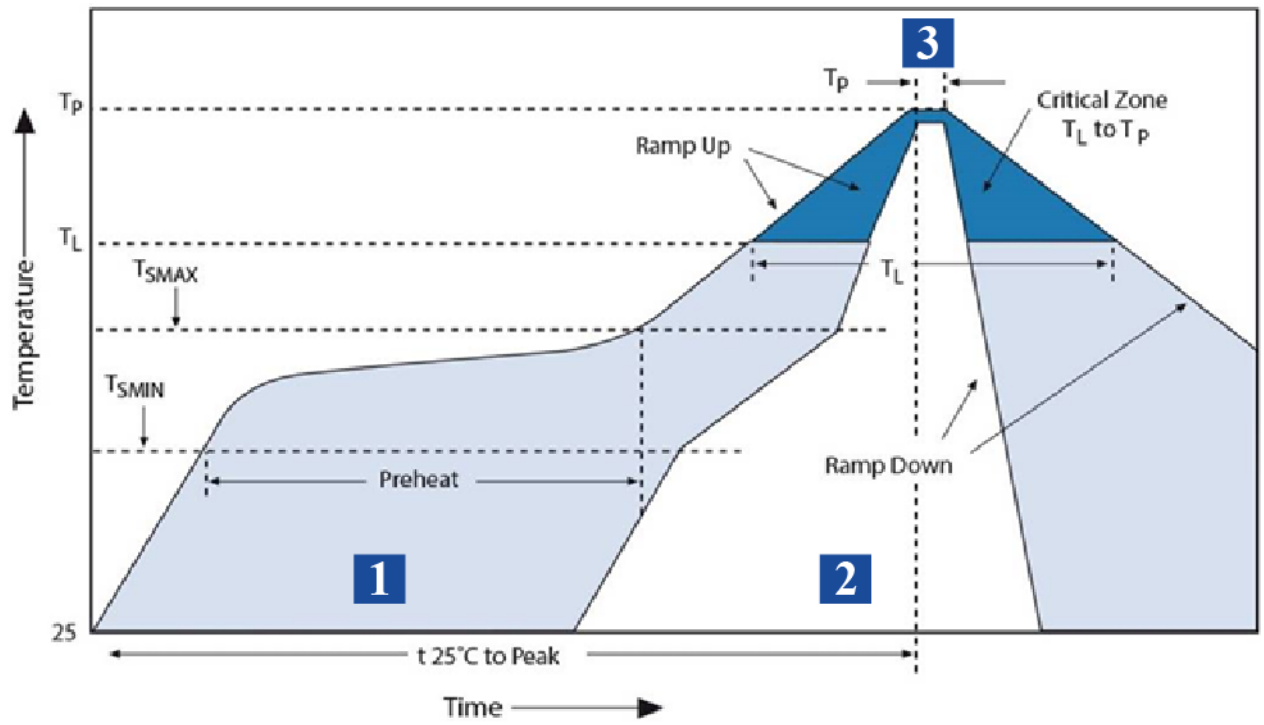
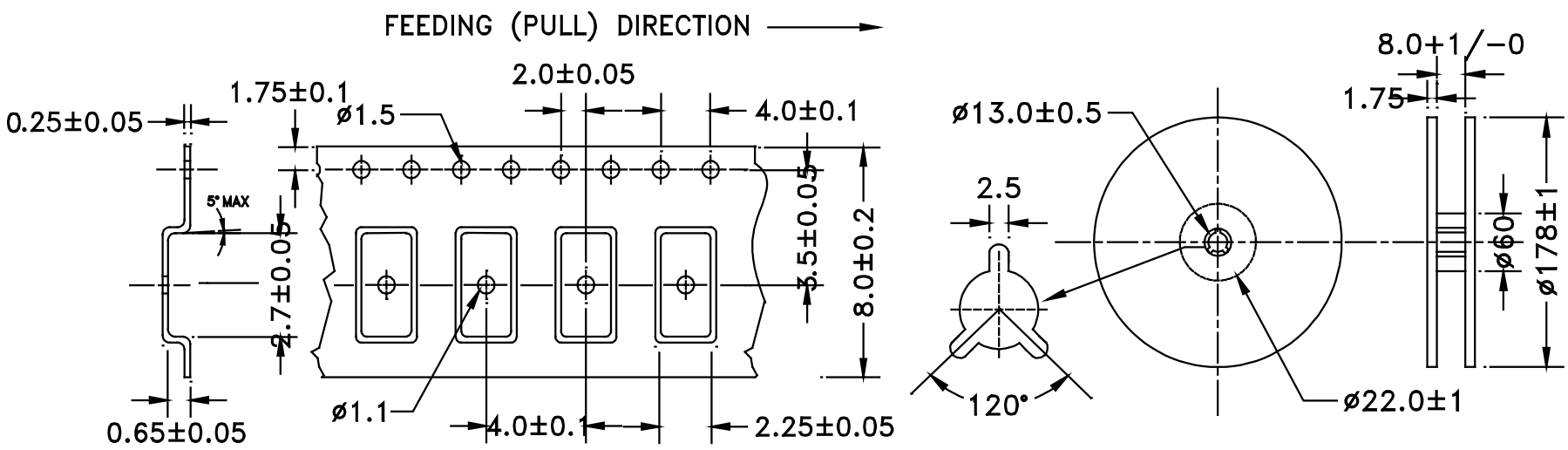
REFLOW PROFILE



Zone	Description	Temperature	Time
1	Preheat	T_{SMIN} - T_{SMAX} 160°C~180°C	120 sec.
2	Reflow	T_L 60°C	60 sec.
3	Peak Heat	T_P 260°C	10 sec. MAX

PACKAGING

T3:3000PCS/REEL



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