

# CERAMIC SMD ULTRA MINIATURE QUARTZ CRYSTAL



2.5 x 2.0 x 0.5 mm

**ABM10**

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

## FEATURES:

- 2.5 x 2.0 x 0.5mm ultra miniature package
- Suitable for RoHS reflow profile
- Tight stability available  $\pm 10$ ppm over -10 to +60°C
- Seam sealed ceramic package assures high precision and reliability

## APPLICATIONS:

- Blue-tooth, Wireless applications
- Computers, Modems, Microprocessors
- Communication, Test equipment
- High density applications
- PCMCIA
- Portable radios and MP3 players

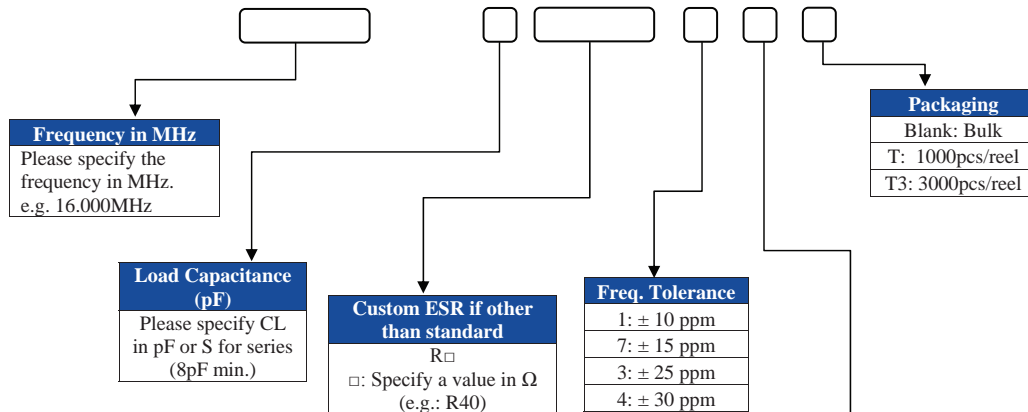
## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	12.000		55.000	MHz	Fundamental
Operation Mode	Fundamental				
Operating Temperature	-10		+60	°C	See options
Storage Temperature	-40		+125	°C	
Frequency Tolerance @ +25°C			$\pm 20$	ppm	See options
Frequency Stability over the Operating Temperature ( ref. to +25°C)			$\pm 30$	ppm	See options
Equivalent series resistance (R1)	See table 1 below				
Shunt capacitance (C0)			7	pF	
Load capacitance (CL)	10			pF	Standard (See options if other than STD)
Drive Level		10	100	$\mu$ W	
Aging @ 25°C $\pm 3$ °C			$\pm 5$	ppm	First year
Insulation Resistance	500			M $\Omega$	@ 100Vdc $\pm 15$ V

Table 1 – standard ESR

Frequency (MHz)	ESR( $\Omega$ ) max.
12.000 – 15.999	250
16.000 – 19.999	150
20.000 – 29.999	100
30.000 – 55.000	70

## OPTIONS & PART IDENTIFICATION: (Left blank if standard)



Operating Temp.	$\pm 10$ ppm	$\pm 15$ ppm	$\pm 20$ ppm	$\pm 30$ ppm	$\pm 50$ ppm	$\pm 100$ ppm
0°C ~ +50°C	I10	I15	I20	I30	I50	I100
-10°C ~ +60°C	A10	A15	A20	STD*	A50	A100
-20°C ~ +70°C	E10	E15	E20	E30	E50	E100
-30°C ~ +70°C	C10	C15	C20	C30	C50	C100
-30°C ~ +85°C	N10	N15	N20	N30	N50	N100
-40°C ~ +85°C	X	X	D20	D30	D50	D100
-40°C ~ +105°C	X	X	X	X	J50	J100
-40°C ~ +125°C	X	X	X	X	K50	K100

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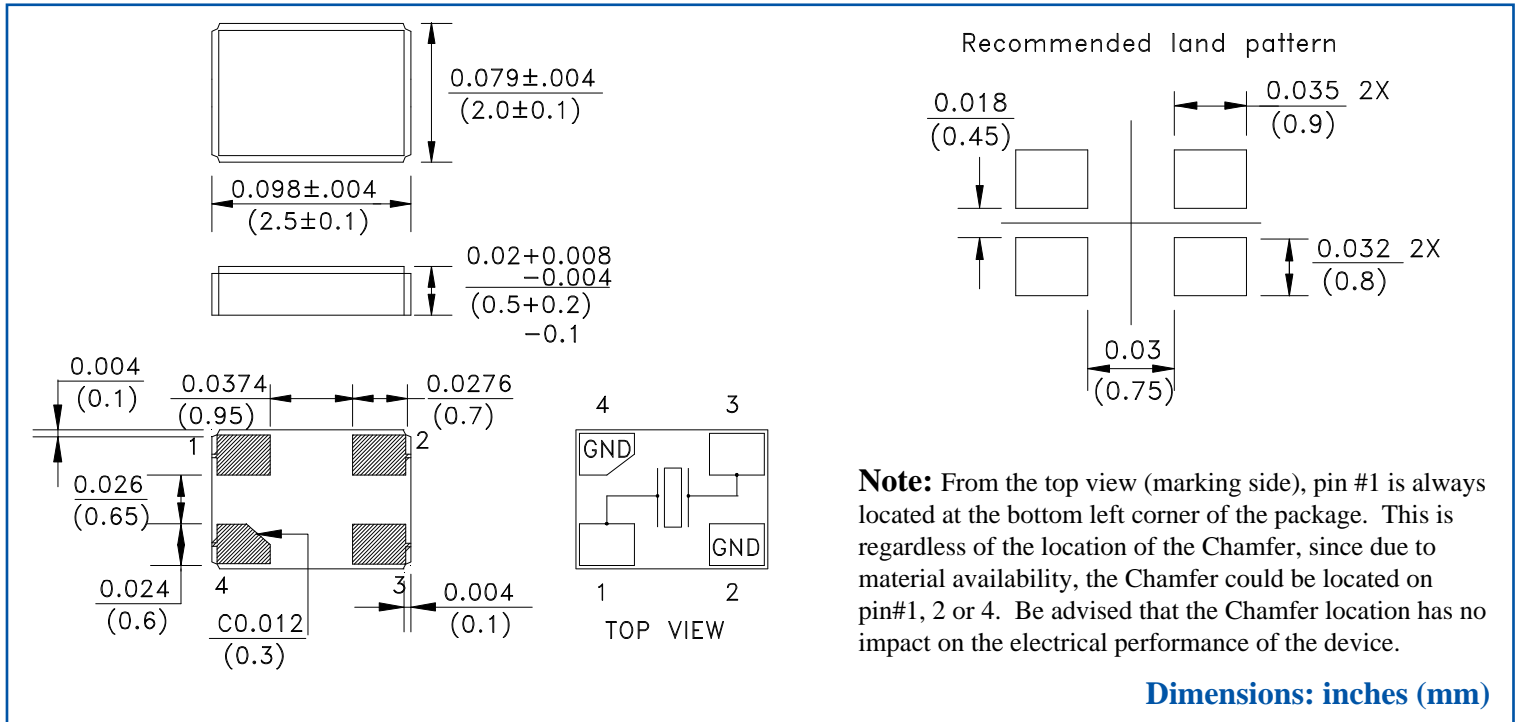


2.5 x 2.0 x 0.5 mm

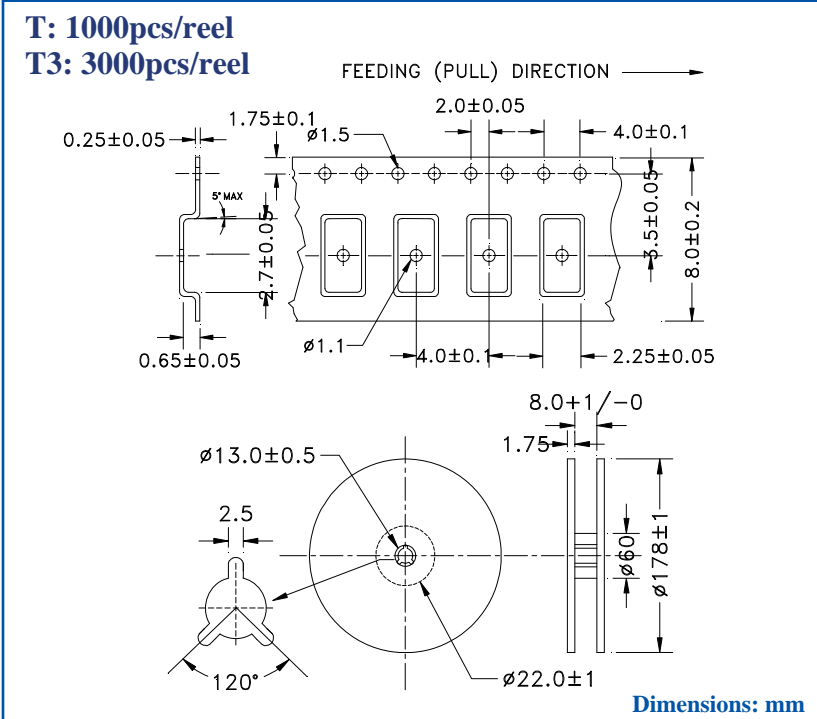
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RoHS/RoHS II Compliant

## OUTLINE DRAWING:



## TAPE & REEL:



## REFLOW PROFILE:

