



**THE DATASHEET OF  
ABMM2-32.768MHZ-E2F-T**



# CERAMIC SURFACE MOUNT LOW PROFILE QUARTZ CRYSTALS

ABMM2



6.0 x 3.6 x 1.2 mm

ABMM2

RoHS/RoHS II Compliant

## FEATURES:

- Suitable for RoHS compliant reflow
- Low height 1.2 mm max
- Seam sealed ceramic package assures high reliability
- Available tight tolerance and stability

## APPLICATIONS:

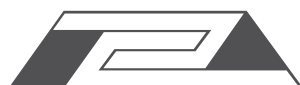
- Computers, Modems, Microprocessors
- Communication, Test equipment
- PCMCIA

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	7.3728		110.00	MHz	
Operation Mode	7.3728 – 30.00MHz	Fundamental			Standard
	30.01 – 100.00MHz	3 <sup>rd</sup> Overtone			Standard
	100.01 – 110.00MHz	5 <sup>th</sup> Overtone			Standard
	30.01 – 50.00MHz	Fundamental			See options
Operating Temperature	-10		+60	°C	See options
Storage Temperature	-40		+85	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	See options
Frequency Stability over the Operating Temperature ( ref. to +25°C)	-20		+20	ppm	See options
Equivalent series resistance (R1)	See table 1 below			Ω	
Shunt capacitance (C0)			7.0	pF	
Load capacitance (CL)		18.0		pF	Standard (See options if other than STD)
Drive Level		100	500	μW	
Aging	-2		+2	ppm	@25°C±3°C First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

**TABLE 1- Standard ESR**

Frequency (MHz)	ESR(Ω) max
7.3728 -7.999999 (Fund)	150
8.000 -9.999999 (Fund)	72
10.000 -50.000 (Fund)	50
30.000 – 100.000 (3 <sup>rd</sup> OT)	60
100.001 – 110.000 (5 <sup>th</sup> OT)	80



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## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ABMM2 -  MHz -  -  -  -  -  -

**Frequency in MHz**  
Please specify the frequency in MHz.  
e.g. 16.000MHz

**Packaging**  
Blank: Bulk  
T: 1000pcs / reel  
T2: 250pcs / reel

**Load Capacitance (pF)**  
Please specify CL in pF (8 to 33pF) or S for series  
Please contact Abracon for other values

**Freq. Stability**  
Blank: Standard  
F; fund. AT for F>30MHz

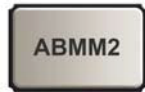
**Custom ESR if other than standard**  
R  
□: Specify a value in Ω (e.g.: R40)

**Freq. Tolerance**  
1: ± 10 ppm  
7: ± 15 ppm

Frequency Stability (ppm)					
Operating Temp.	±10	±20	±30	±50	±100
0°C ~ +50° C	A3	A4	A6	-----	-----
-10°C ~ +50°C	B3	B4	B6	-----	-----
-10°C ~ +60°C	C1	Std	C6	-----	-----
-20°C ~ +70°C	E1	E2	E6	-----	-----
-40°C ~ +85°C	-----	D1	D6	D5	-----
-40°C ~ +1 05°C	-----	-----	-----	J5	J10
-40°C ~ +1 25°C	-----	-----	-----	K5	K10



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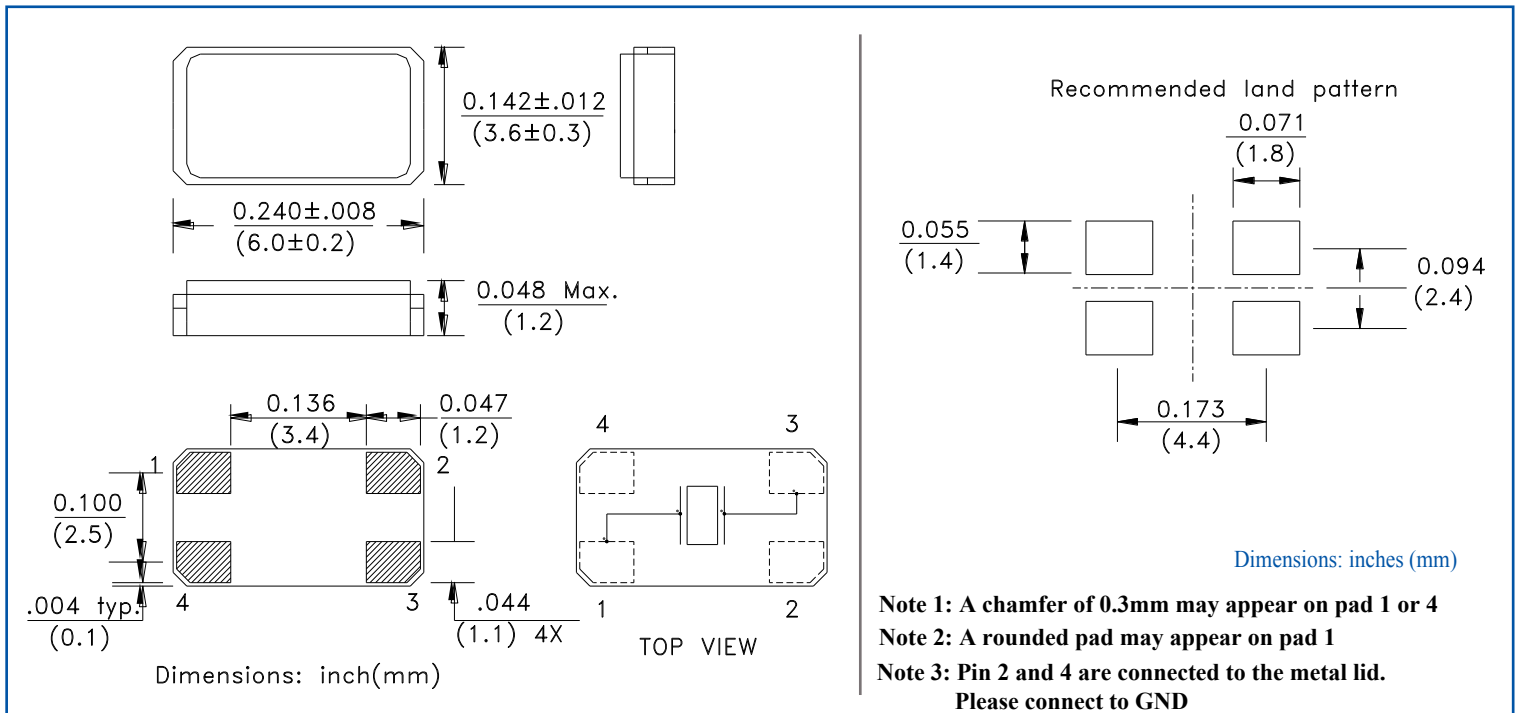


6.0 x 3.6 x 1.2 mm

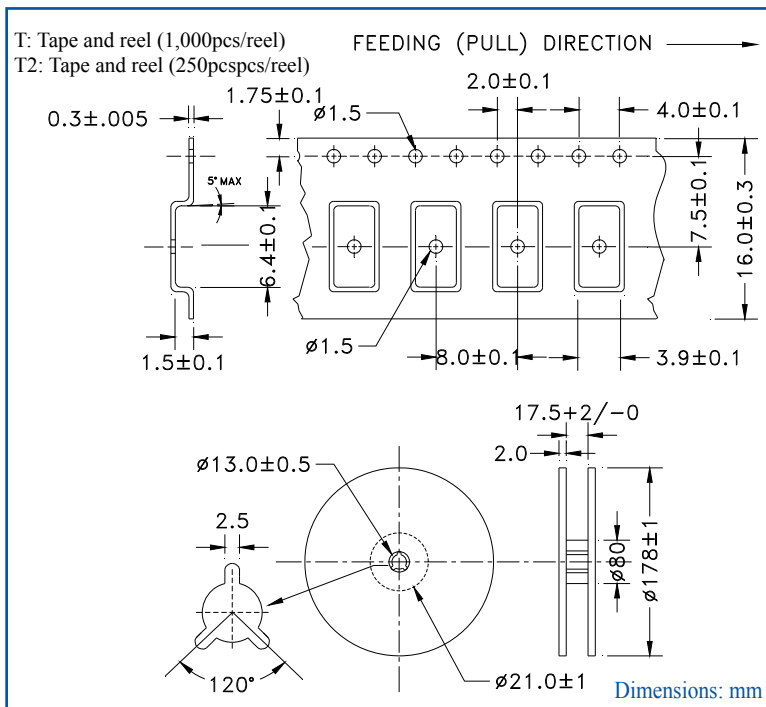
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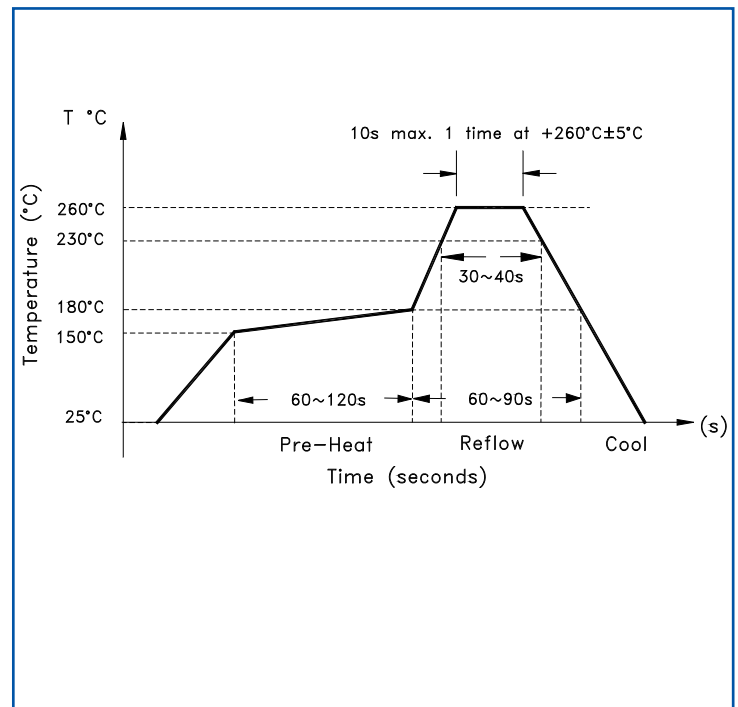
## OUTLINE DRAWING:



## TAPE & REEL:



## REFLOW PROFILE



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