

## SPECIFICATIONS

Frequency: **12.288MHz**  
 Operation mode: **Fundamental AT**  
 Operating temperature: **-20° C to +70° C**  
 Storage temperature: **-40° C to +85° C**  
 Frequency tolerance: **±30 ppm max.**  
 Frequency stability: **±50 ppm max.**  
 Equivalent series resistance: **60W max.**  
 Shunt capacitance C0: **7 pF max.**  
 Load capacitance CL: **13pF**  
 Drive level: **500 mW max, 100µW correlation**  
 Aging @ 25° C per year: **± 2 ppm max.**  
 Insulation resistance: **500 MW min. with 100Vdc ± 15V**

## PACKAGING:

-T = Tape and Reel (1000pcs/reel)

## SPECIAL REQUIREMENTS

This part must be RoHS compliant

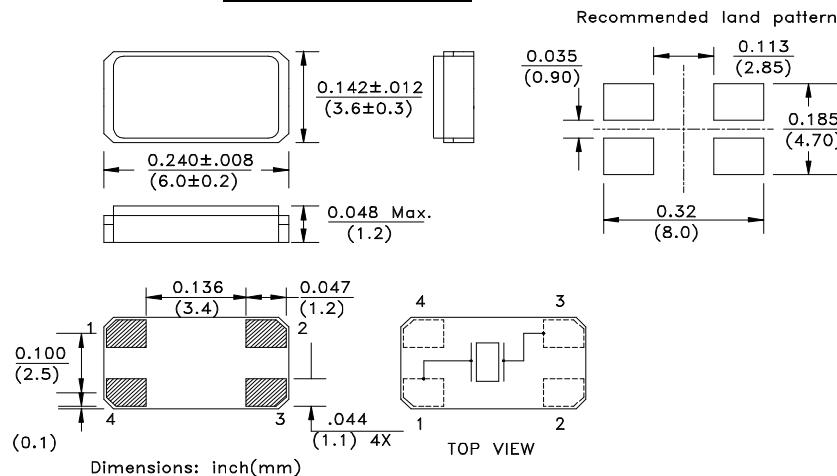
## ENVIRONMENTAL AND MECHANICAL SPECIFICATIONS:

Temperature Cycling	±5ppm max., -40°C to +85°C at 95% RH ten times for 24 hours, 3 cycles then for 2 hours at 25°C ± 3°C.
Thermal Shock	Exposure at extreme temperature -40°C and +85°C for 5 minutes, 3 Cycles.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55 Hz within 1 minute for 2 hours minimum on each axis (X, Y, Z).
Drop Test	Natural drop on a hard wood board at 75cm, 3 times.
Humidity	85%RH at +85°C, 96 hours minimum.
Marking Permanency	Dip units in solvent, 10 strokes with brush, 3 times.
Fine Leak Test	Helium leak, less than 2 x 10 <sup>-8</sup> atm.cc/sec.
Gross Leak Test	100% in De-ionized H <sub>2</sub> O or Perfluoro carbon for 60s min.
Solderability Test	Dip units in solder (230°C ± 5°C) for 5 seconds. More than 95% of surface being tested should be coated uniformly with solder.

All specifications and markings subject to change without notice.

REV.	ECO	DESCRIPTION	DATE	APPROVED
A	969	Change CL from 13pF to 18pF	1/13/2005	KW
B	980	Change CL from 18pF to 13pF	1/13/2005	KW

## OUTLINE DRAWING



Dimensions: inch (mm)

TOLERANCES:  
 UNLESS OTHERWISE SPECIFIED:  
 .XXX: ± 0.008 (0.2)  
 ANGLE: ± 1°

APPROVALS	BY	DATE
DRAWN		
PROD. MGR.		
ENGR. MGR.		
QUALITY		
PURCH.		

500710			
KEY PRODUCT CHARACTERISTICS			
SAFETY/COMPLIANCE	FIT/FUNCTION		
	ABRACON CORPORATION		
	30332 ESPERANZA, RSM		
	CA. 92688 (949) 546-8000		
	FAX: (949) 546-8001		
P/N	<b>ABMM2-112-12.288MHz</b>		
TITLE	<b>CERAMIC SURFACE MOUNT</b>		
	<b>QUARTZ CRYSTAL</b>		
DWG. NO.	REV.	SIZE	SHEET
<b>451891</b>	<b>B</b>	A	1 of 1