



**ABM8GAIG**

Pb in glass  
(exempt 7(c) - I per RoHS II 2011/65/EU Annex)

**3.2 x 2.5 x 0.8 mm**  
**RoHS/RoHS II Compliant**  
**MSL = N/A: Not Applicable**

## Features

- AEC-Q200 Qualified
- Automotive Grade 1: -40°C to +125°C
- TS16949 Production Line Certified
- PPAP Available Upon Request
- Hermetically Glass-sealed Ceramic Package
- RoHS/RoHS II Compliant

## Applications

- Infotainment Systems
- Keyless Entry & Startup
- GPS & Navigation
- Comfort control
- ADAS (Advanced Driver Assistance Systems)
- Vehicle to Vehicle Communication
- LiDAR (Light Detection and Ranging)
- In-vehicle Networking
- Powertrain & Drive Control
- Power Control & Conversion
- Industrial Control & Automation

## Electrical Specifications

Parameters	Min.	Typ.	Max.	Units	Notes
Frequency Range	10.000		54.000	MHz	
Operation Mode	Fundamental				
Operating Temperature	-40		+125	°C	Option "blank"; See options
Storage Temperature	-40		+125	°C	
Frequency Tolerance @ +25°C	-50		+50	ppm	Option "blank"; See options
Frequency Stability over the Operating Temperature ( ref. to +25°C)	-100		+100	ppm	Option "blank"; See options
Equivalent series resistance (R1)			200	Ω	10.000 – 12.000 MHz
			100		12.000 – 15.999 MHz
			80		16.000 – 19.999 MHz
			60		20.000 – 54.000 MHz
Shunt capacitance (C0)			2.0	pF	
Load capacitance (CL)		10		pF	Option "blank"; See options
Drive Level		10	100	μW	
Aging	-2		+2	ppm	@25°C± 3°C First year
Insulation Resistance	500			MΩ	@100 Vdc ± 15V



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## Options and Part Identification (left blank if standard)

ABM8GAIG- [ ] MHz - [ ] - [ ] - [ ] [ ] [ ] [ ] - [ ]

**Frequency in MHz**  
Please specify the frequency in MHz.  
(e.g. 14.31818MHz)

**Load Capacitance (pF)**  
Blank: 10pF  
If not standard, please specify CL in pF or S for series

**Custom ESR if other than standard**  
R □: Specify a value in Ω (e.g.: R80)

**Packaging**  
Blank: Bulk  
T: 1k pcs / reel  
T3: 3k pcs / reel

**Operating Temp.**  
Blank: -40°C to +125°C  
N: -30°C to +85°C  
D: -40°C to +85°C  
J: -40°C to +105°C

**Freq. Tolerance**  
Blank: ± 50 ppm  
4: ± 30 ppm  
3: ± 25 ppm  
2: ± 20 ppm  
7: ± 15 ppm  
1: ± 10 ppm

**Freq. Stability**  
Blank: ± 100 ppm  
Z: ± 50 ppm  
P: ± 45 ppm (\*)  
F: ± 40 ppm (\*)  
H: ± 35 ppm (\*)  
Y: ± 30 ppm (\*)  
W: ± 25 ppm (\*)  
X: ± 20 ppm (\*)  
G: ± 15 ppm (\*)

(\*) Contact Abracon for Availability

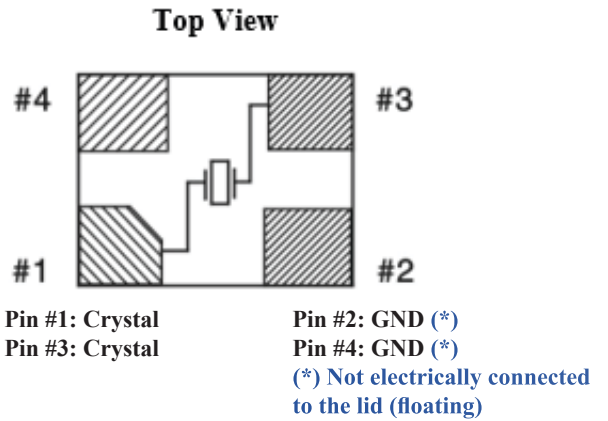
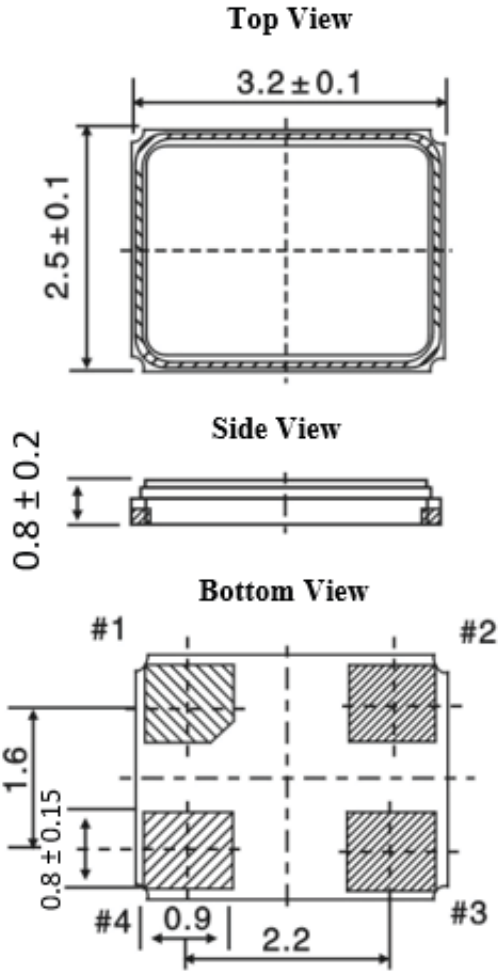


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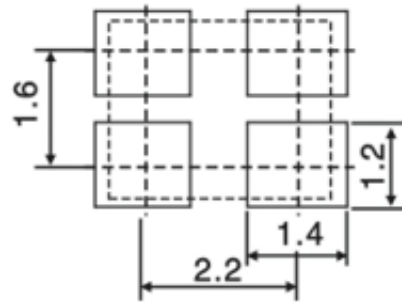
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## Mechanical Dimensions



## Recommended Land Pattern



**Note:** Due to availability of raw materials, this part may be manufactured with the chamfer on pin 1 or pin 4. Be advised that this does not affect the electrical characteristics of the crystal in any way.

Dimensions: mm

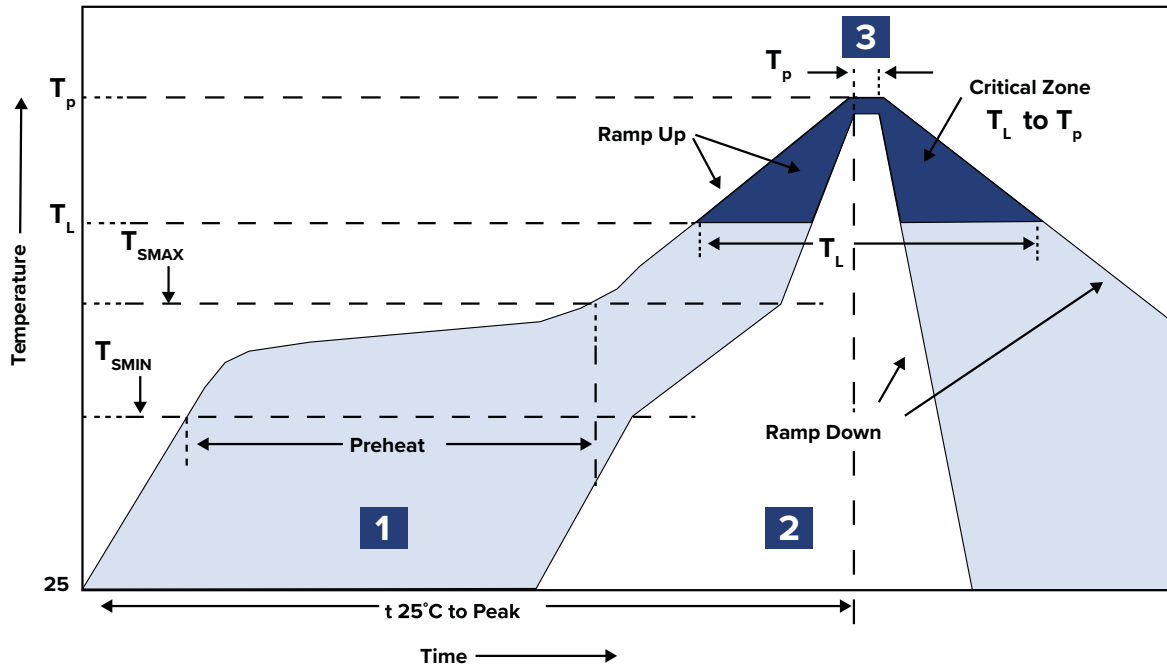


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## Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ $150^\circ\text{C} \sim 180^\circ\text{C}$	60 ~ 120 sec.
2	Reflow	$T_L$ $230^\circ\text{C}$	30 ~ 40 sec.
3	Peak heat	$T_P$ $260^\circ\text{C} \pm 5^\circ\text{C}$	10 sec. MAX



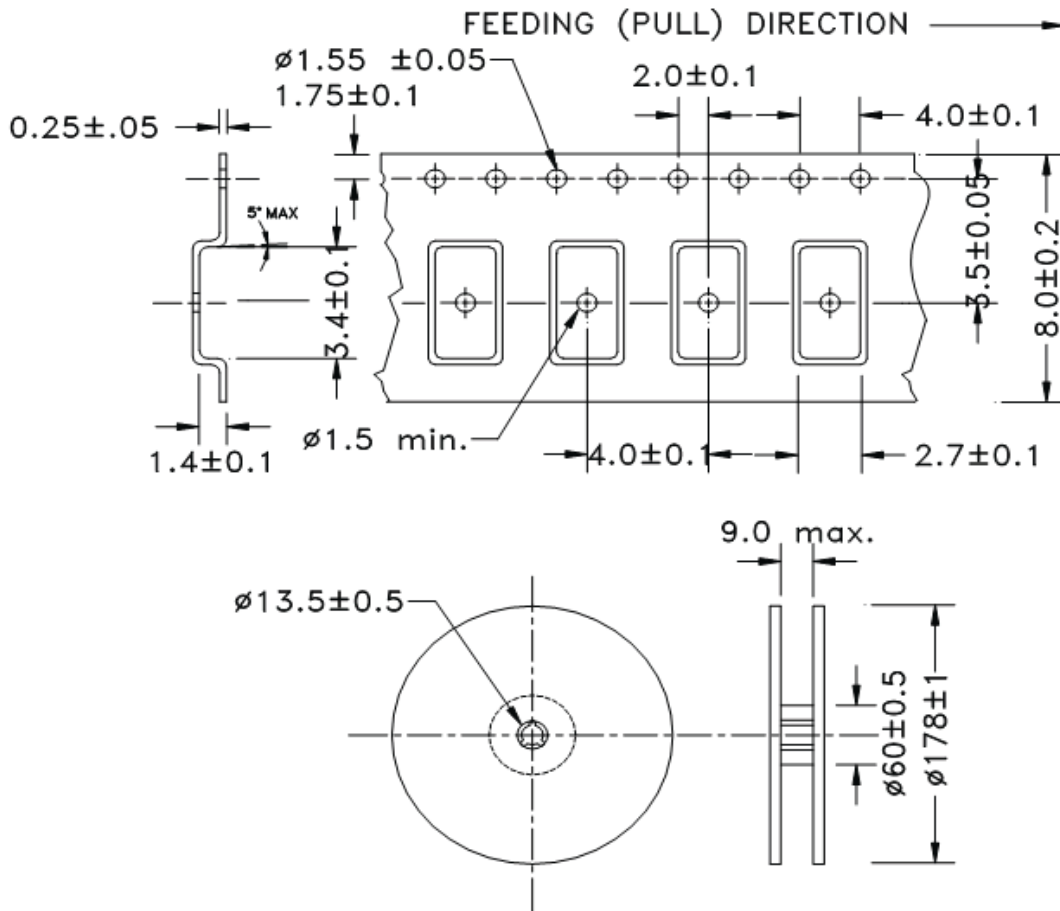
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## Packaging

Tape and Reel:  
T: 1,000pcs/reel  
T3: 3,000pcs/reel



Dimensions: mm

**ATTENTION:** Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.