



**THE DATASHEET OF  
ABM10AIG-20.000MHZ-4Z-T3**





ABM10AIG



2.5 x 2.0 x 0.55 mm  
**RoHS/RoHS II Compliant**  
 MSL = N/A: Not Applicable

## Features

- AEC-Q200 Qualified
- Automotive Grade 1: -40°C to +125°C
- Automotive Grade 0: -40°C to +150°C (Available Upon Request)
- TS16949 Production Line Certified
- PPAP Available Upon Request
- Hermetically Seam-sealed Ceramic Package
- RoHS/RoHS II Compliant and Pb free

## 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	12.000		62.500	MHz	
Operation Mode	Fundamental				
Operating Temperature <sup>[Note 1]</sup>	-40		+125	°C	Option "blank"; See options
	-40		+150		Option "V"; See options
Storage Temperature <sup>[Note 1]</sup>	-40		+125	°C	Option "blank, J, D, N"
	-40		+150		Option "V"
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
	-150		+150		Option "R"; See options
Equivalent series resistance (R1)			150	Ω	12.000-15.999 MHz
			80		16.000-19.999 MHz
			60		20.000-29.999 MHz
			50		30.000-34.999 MHz
			40		35.000-62.500 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

Note 1: Operating temperature range option -40°C to +150°C only available in select frequencies and electrical performance options. Please contact Abracon for availability.

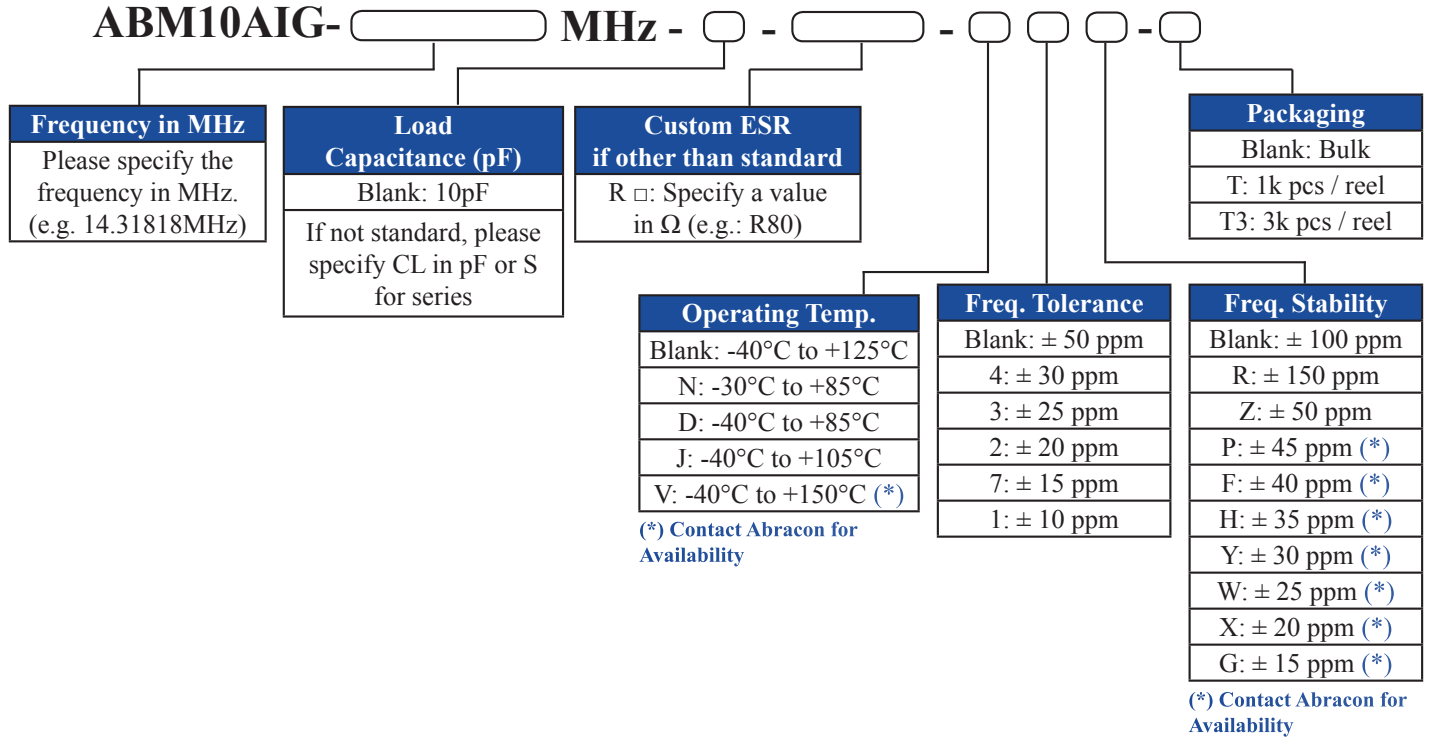


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## Options and Part Identification (left blank if standard)





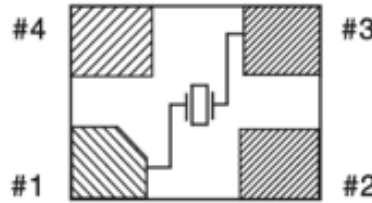
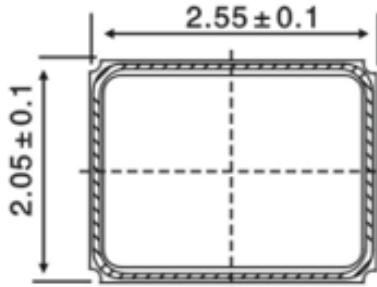
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## Mechanical Dimensions

**Top View**



Pin #1: Crystal  
 Pin #3: Crystal

Pin #2: GND (\*)  
 Pin #4: GND (\*)

(\*) Electrically connected to lid

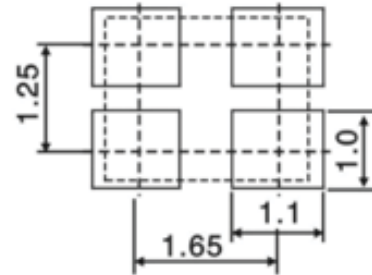
**Side View**



**Bottom View**



**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

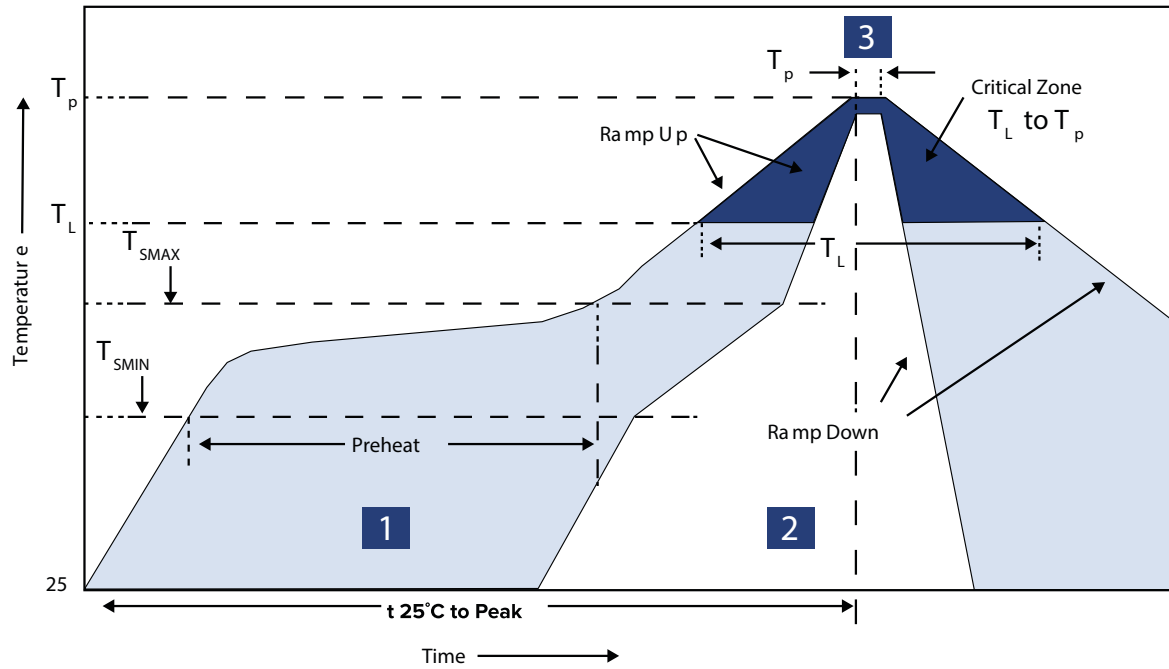


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## Reflow Profile



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



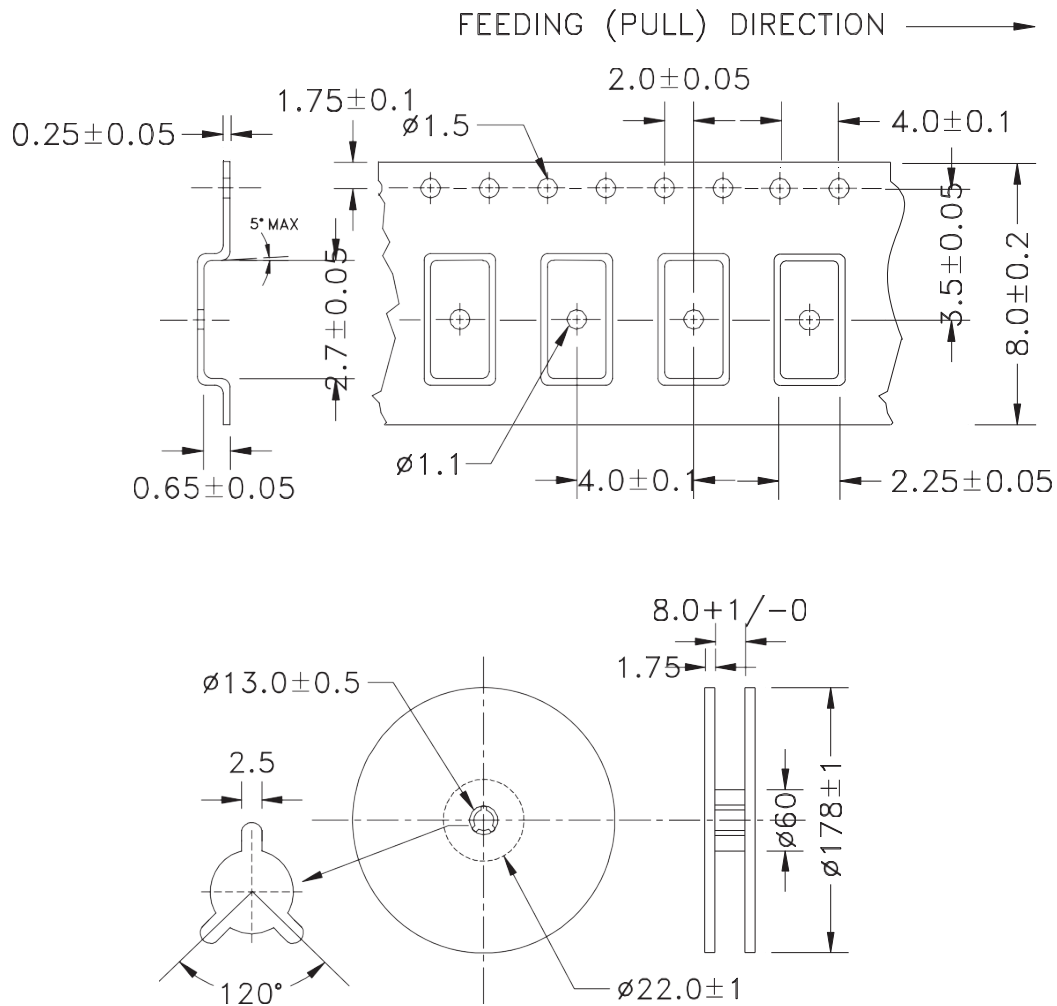
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## Packaging

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.

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- ⊖ [Abracon LLC Information](#)

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- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management