

MINIATURE CERAMIC SMD CRYSTAL

ABM12 Series

Request Samples



Check Inventory



1.6 x 1.2 x 0.45 mm
RoHS/RoHS II Compliant
MSL Level = N/A

Features

- Suitable for RoHs reflow profile
- Available tight tolerance and stability
- Electron beam sealed ceramic package assures high precision and reliability

Applications

- Bluetooth, Wireless applications
- Computers, Modems, Microprocessors
- Communication, Test equipment
- High density applications
- PCMCIA

Key Electrical Specifications

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	24.000		80.000	MHz	
Standard Frequencies	26.000, 32.000 and 36.000MHz				(Contact Abracon for other frequencies)
Operation Mode	Fundamental				
Operating Temperature	-10		+50	°C	Option “blank”; See options
Storage Temperature	-40		+85	°C	
Frequency Tolerance @+25°C	-50		+50	ppm	Option “blank”; See options
Frequency Stability over the Operating Temperature (ref. to +25°C)	-50		+50	ppm	Option “blank”; See options
Equivalent series resistance (R1)			200	Ω	24.000~39.999MHz
			100		40.000~80.000 MHz
Shunt capacitance (C0)			5	pF	
Load capacitance (CL)	8			pF	Option “blank”; See options
Drive Level		10	100	μW	
Aging	-5		+5	ppm	@ 25°C±3°C First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

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Options And Part Identification (Left Blank If Standard)

ABM12- MHz- -R - -

Frequency in MHz

Please specify the
Frequency in MHz.
e.g. 26.000MHz

Load Capacitance

Blank: 8pF
5: 5pF
6: 6pF
7: 7pF

Contact Abracon for
other values

Custom ESR if other than standard

R
☐: Specify a value in Ω
(e.g.: R40)

Operating Temp.

Blank: -10°C ~ +50°C
A: -10°C ~ +60°C
B: -20°C ~ +70°C
D: -40°C ~ +85°C

Packaging

Blank: Bulk
T: 1kpcs / reel
T3: 3kpcs / reel

Freq. Stability

Blank: ± 50 ppm
U: ± 10 ppm (*)
G: ± 15 ppm (*)
X: ± 20 ppm (*)
Y: ± 30 ppm
Q: ± 100 ppm

(*) Contact ABRACON
for availability

Freq. Tolerance

Blank: ± 50 ppm
1: ± 10 ppm (*)
7: ± 15 ppm
2: ± 20 ppm
4: ± 30 ppm

(*) Contact ABRACON
for availability

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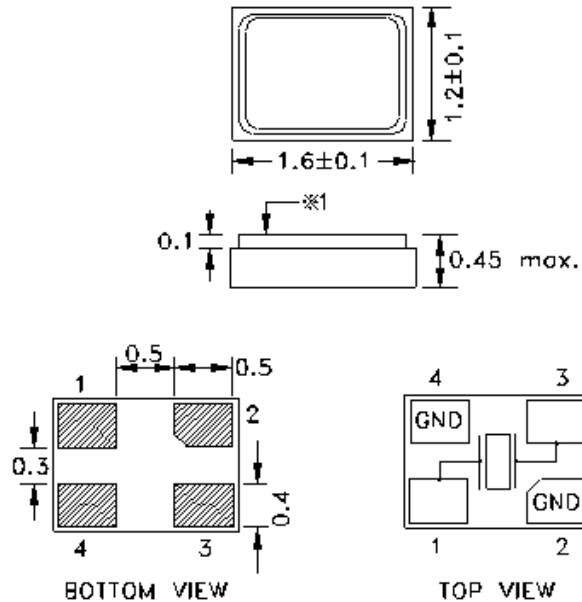
Check Inventory



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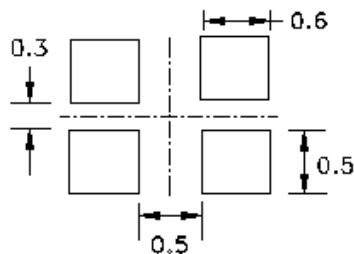


Mechanical Dimensions



Pin 2 and pin 4 are connected to the metal lid (*1). (Please connect to GND)

Recommended land pattern



Dimensions: mm

Note 1: Due to material availability, the outline and finish color of the component lid may vary. This variation in no way affects the electrical performance of the product.

Note 2: Due to material availability the Chamfer could be located on pin #1, 2 or 4. Be advised that the Chamfer location has no impact on the electrical performance of the device.

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Reflow Profile [JEDEC J-STD-020]

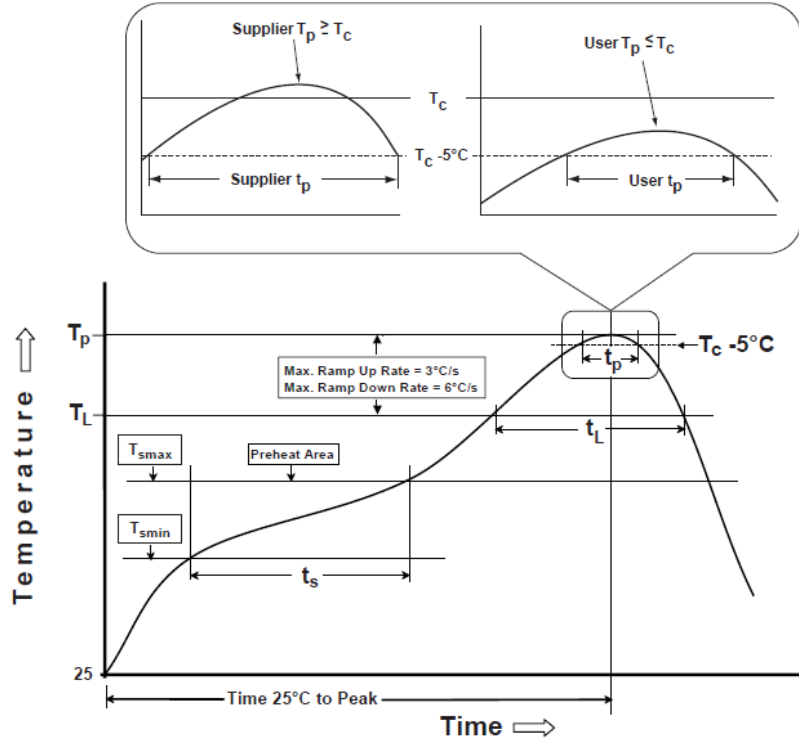


Table 1

SnPb Eutectic Process

Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process

Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T_p)*	see Table 1	see Table 2
Time (t_p)* within 5°C of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

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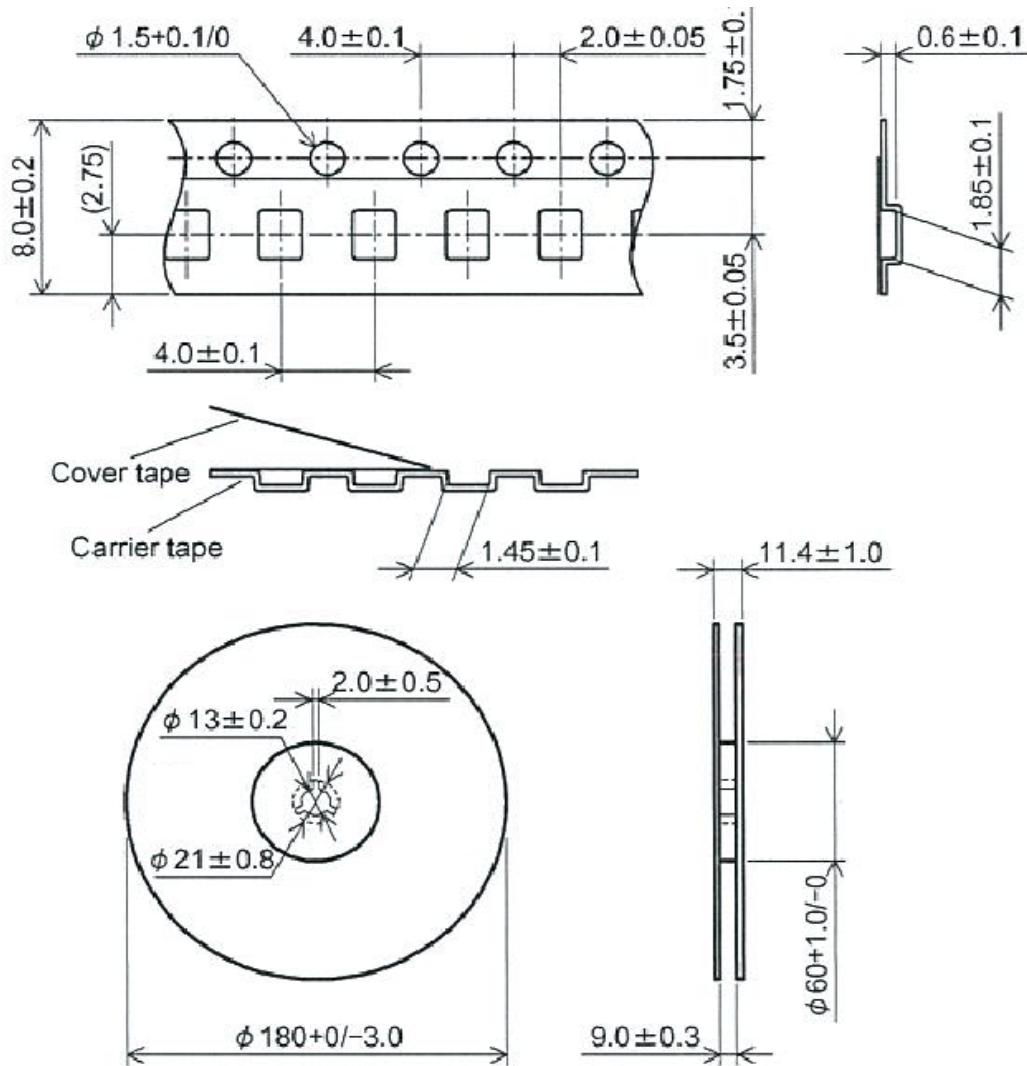
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Packaging

Option "-T": Tape and reel (1,000pcs/reel)

Option "-T3": Tape and reel (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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Mouser Electronics

Authorized Distributor

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ABRACON:

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