

MINIATURE CERAMIC SMD CRYSTAL

ABM12



RoHS/RoHS II Compliant



1.6 x 1.2 x 0.45mm

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

FEATURES:

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

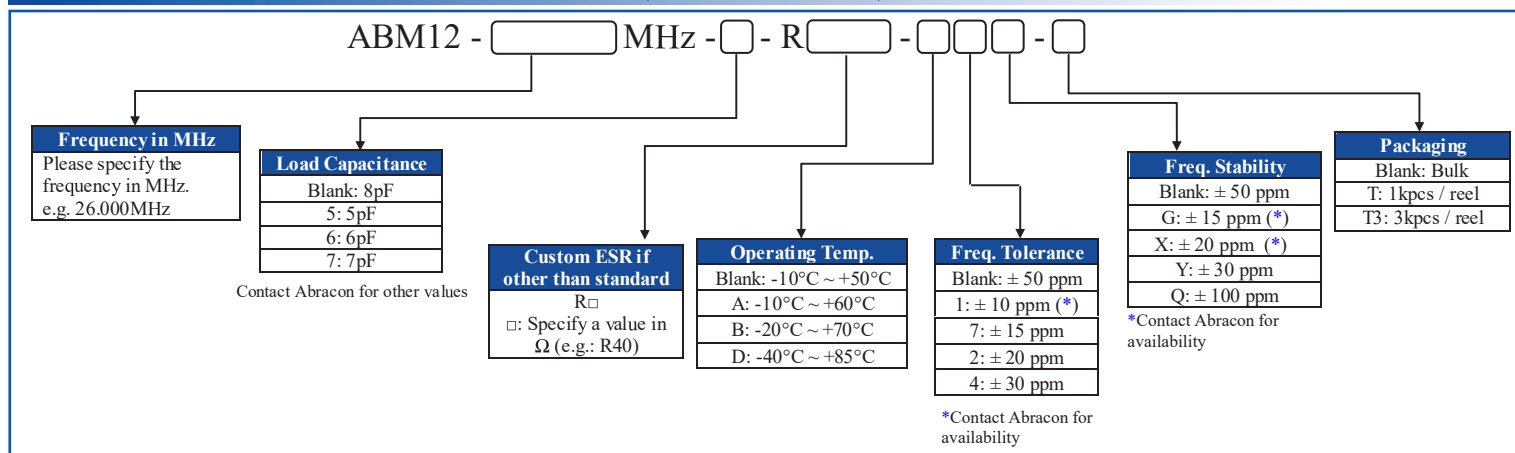
APPLICATIONS:

- Blue-tooth, Wireless applications
- Computers, Modems, Microprocessors
- Communication, Test equipment
- High density applications
- PCMCIA
- Portable radios and MP3 players

STANDARD 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				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

OPTIONS & PART IDENTIFICATION: (Left blank if standard)



MINIATURE CERAMIC SMD CRYSTAL

ABM12

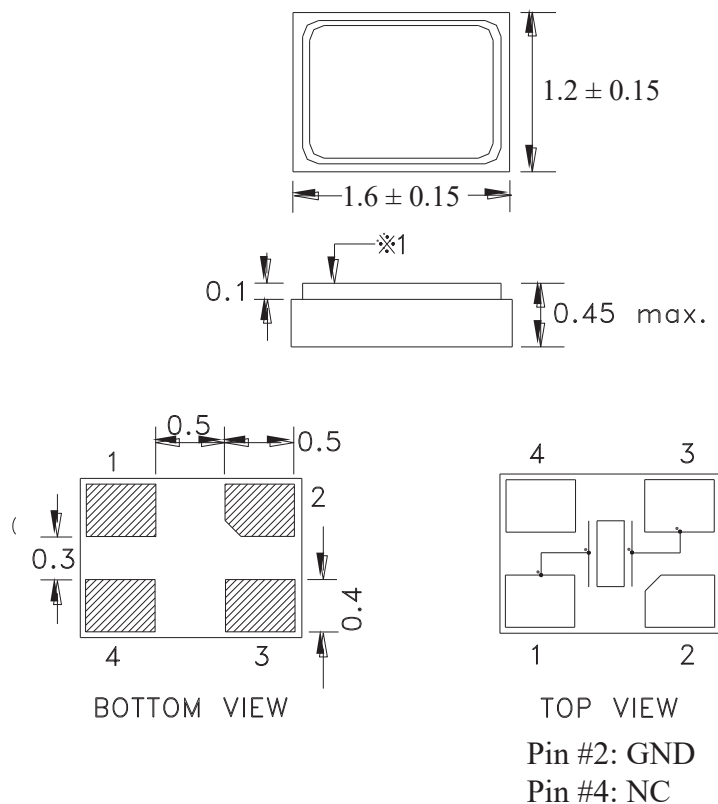


RoHS/RoHS II Compliant

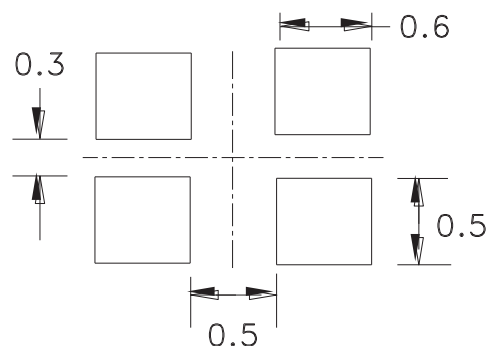


1.6 x 1.2 x 0.45mm

OUTLINE DRAWING:



Recommended land pattern



Pin 2 is connected to the metal lid (*1).
(Please connect to GND)

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.

Dimensions: mm

MINIATURE CERAMIC SMD CRYSTAL

ABM12



RoHS/RoHS II Compliant



1.6 x 1.2 x 0.45mm

➤ Reflow Profile [JEDEC J-STD-020]

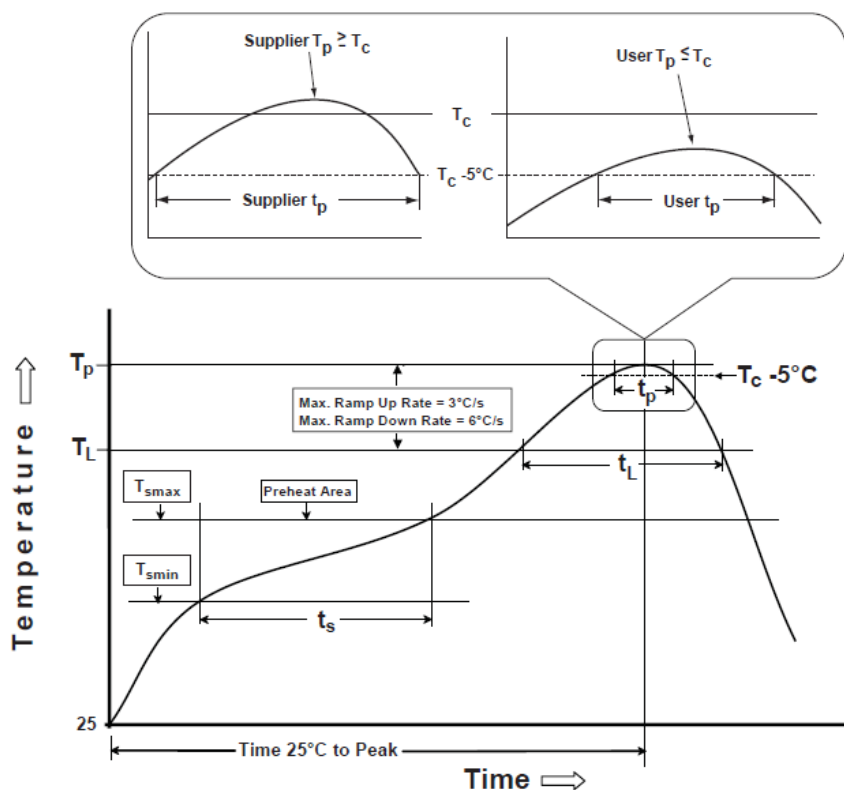


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 ÅC	220 ÅC
≥2.5 mm	220 ÅC	220 ÅC

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 ÅC	260 ÅC	260 ÅC
1.6 mm - 2.5 mm	260 ÅC	250 ÅC	245 ÅC
>2.5 mm	250 ÅC	245 ÅC	245 ÅC

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100 ÅC	150 ÅC
Temperature maximum (T_{smax})	150 ÅC	200 ÅC
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3 ÅC/sec. max	3 ÅC/sec. max
Liquidous temperature (T_L)	183 ÅC	217 ÅC
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 ÅC of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_p to T_{smax})	6 ÅC/sec. max	6 ÅC/sec. max
Time 25 ÅC 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.

MINIATURE CERAMIC SMD CRYSTAL

ABM12



RoHS/RoHS II Compliant

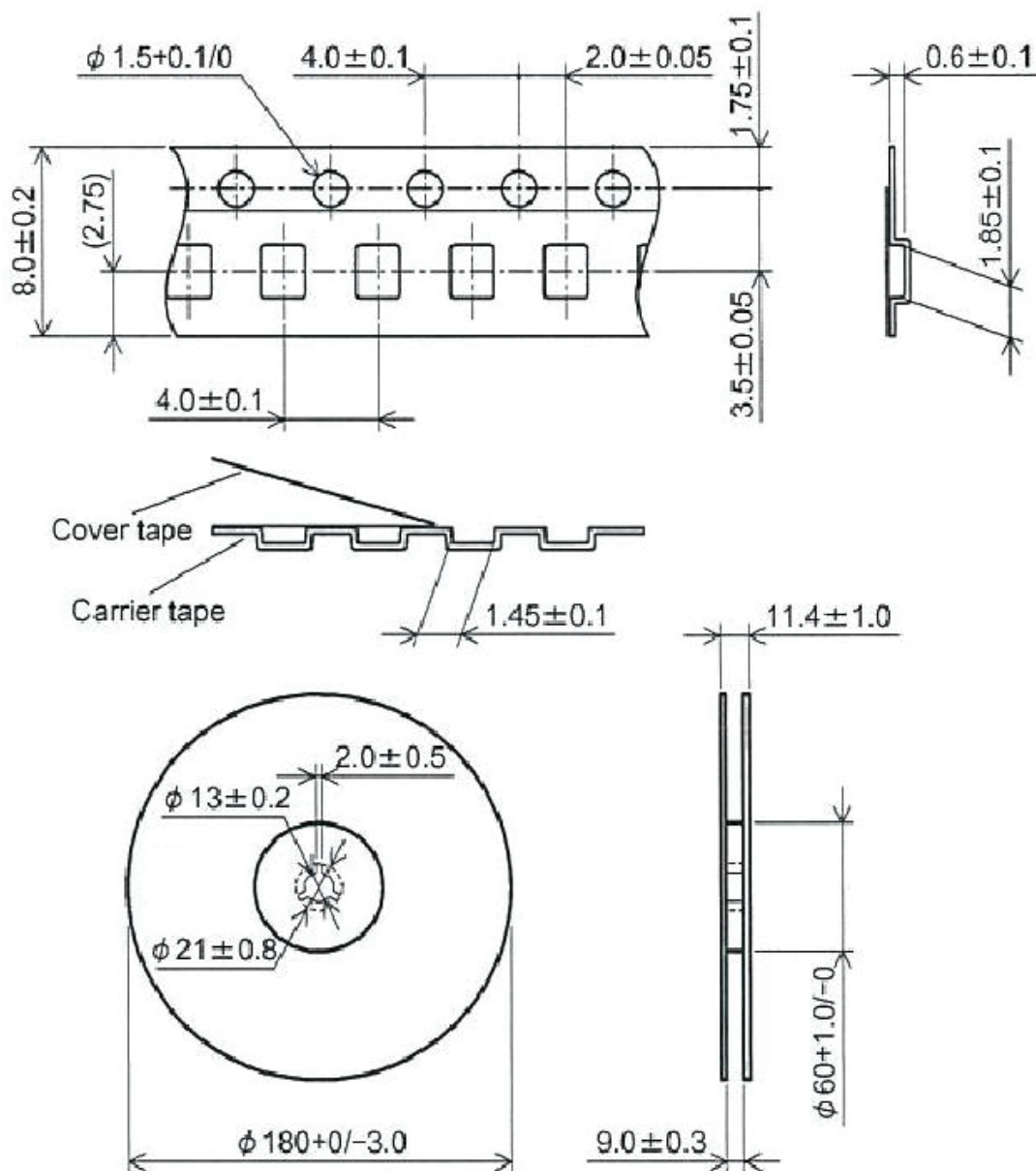


1.6 x 1.2 x 0.45mm

TAPE & REEL:

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

Option "-T3": Tape and reel (3,000pcs/reel)



Dimensions: mm