

32.768kHz SMD Crystal

ABS06

Request Samples



Check Inventory



2.0 x 1.2 x 0.6 mm
RoHS/RoHS II Compliant
MSL Level = N/A



Features

- 2.0 x 1.2 x 0.6mm ideal for high density circuit boards
- Ceramic package offers excellent environmental & heat resistance
- Extended temperature -55°C to +125°C for industrial applications

Applications

- Wide range in communication & measuring equipment
- Commercial & Industrial applications
- Wireless communications

Key Electrical Specifications

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency	32.768			kHz	
Operation Mode	Flexural Mode (Tuning Fork)				
Operating Temperature	-40		+85	°C	Option "blank"; See options
Storage Temperature	-55		+125	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	Option "blank"; See options
Temperature Coefficient:	-0.04	-0.03	-0.02	ppm/T ²	
Turn-over temperature:	+20	+25	+30	°C	
Equivalent series resistance (R1)			90	kΩ	For -40 ~ +85°C option
			110	kΩ	For -40 ~ +125°C option & -55 ~ +125°C option
Load capacitance (CL)		12.5		pF	Option "blank"; See options
Shunt capacitance (C0)		0.9 ~ 1.4	2.0	pF	
Drive Level		0.1	0.5	μW	
Q value	9000				
Aging	-3		+3	ppm	@25°C± 3°C First year
Insulation Resistance	500			MΩ	@ 100Vdc ± 15V

32.768kHz SMD Crystal

ABS06

Request Samples



Check Inventory



2.0 x 1.2 x 0.6 mm
RoHS/RoHS II Compliant
MSL Level = N/A



Options and Part Identification (left blank if standard)

ABS06 – 32.768 kHz - - - -

Load Capacitance
Blank: 12.5pF
9: 9pF
7: 7pF
6: 6pF
4P: 4pF

Operating Temp. Range
Blank: -40 ~ +85°C
H: -40 ~ +125°C
W: -55 ~ +125°C

Freq. Tolerance
Blank: ±20ppm
1: ±10ppm
4: ±30ppm

Packaging
Blank: Bulk
T: 3k pcs / reel

32.768kHz SMD Crystal

ABS06

Request Samples



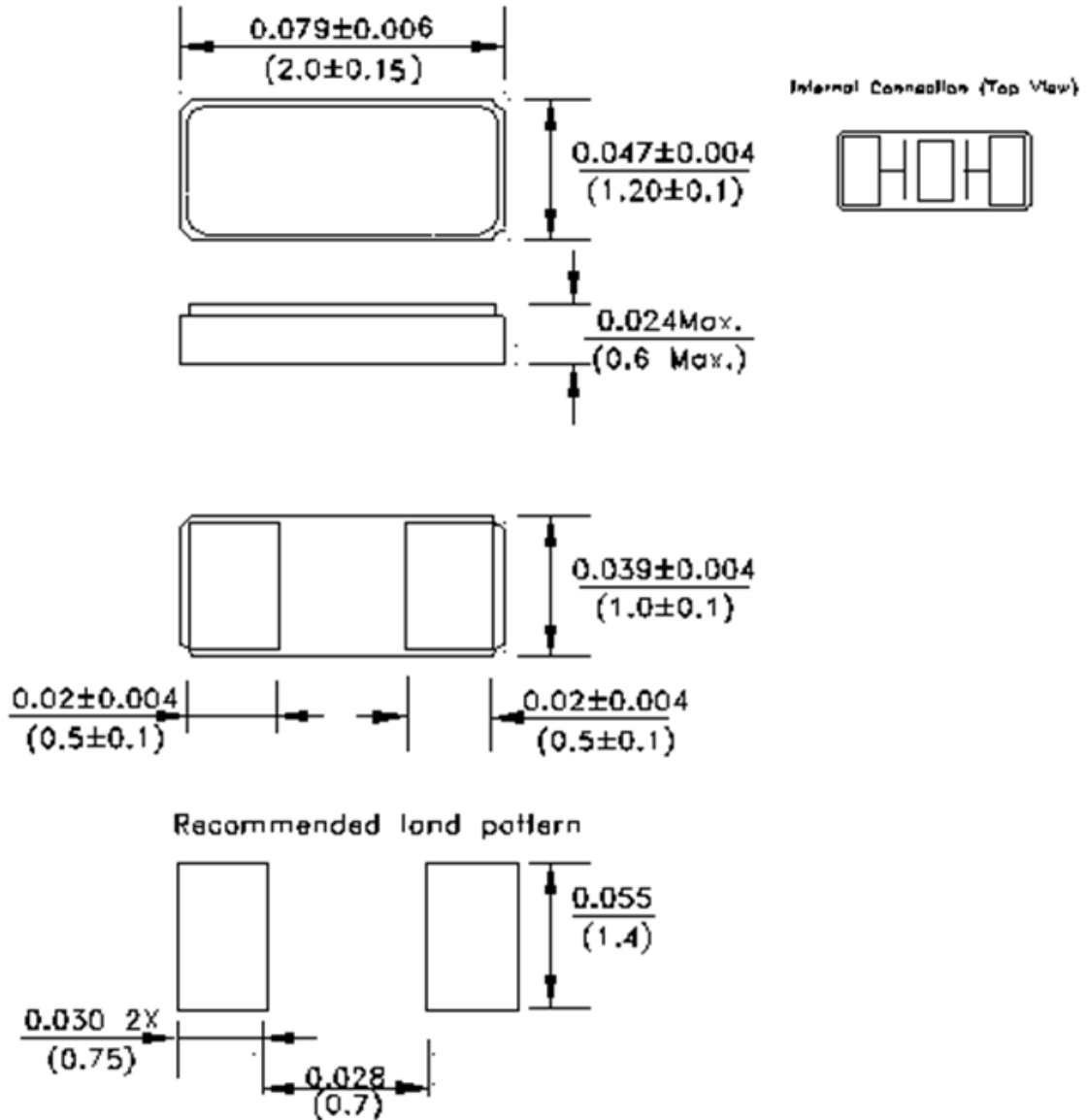
Check Inventory



2.0 x 1.2 x 0.6 mm
RoHS/RoHS II Compliant
MSL Level = N/A



Mechanical Dimensions



Dimensions: inches (mm)

Notes:

- Chamfer not shown.
- Due to material availability, the outline and finish color of the component may vary. This variation in no way affects the electrical performance of the product.

32.768kHz SMD Crystal

ABS06

Request Samples



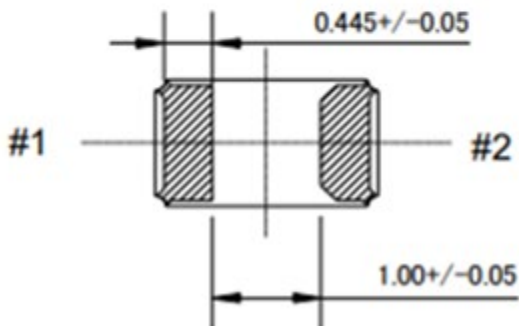
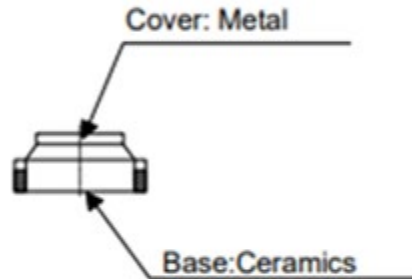
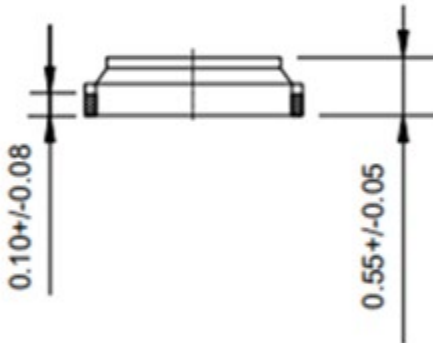
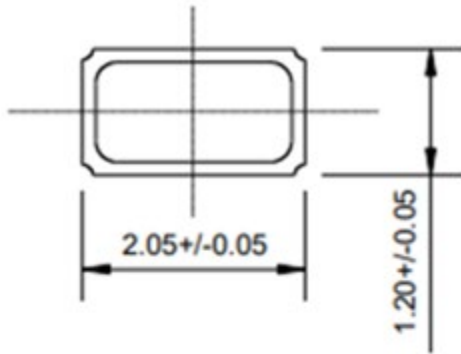
Check Inventory



2.0 x 1.2 x 0.6 mm
RoHS/RoHS II Compliant
MSL Level = N/A



Alternative Mechanical Dimensions 1



INTERNAL CONNECTION
(TOPVIEW)



Dimensions: mm

32.768kHz SMD Crystal

ABS06

Request Samples



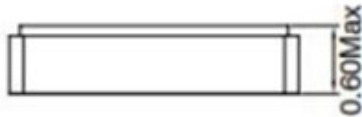
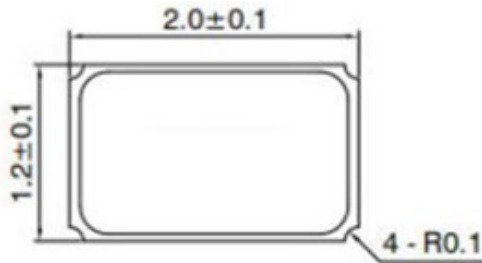
Check Inventory



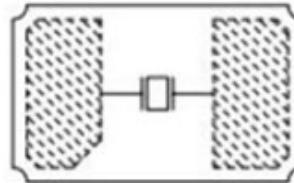
2.0 x 1.2 x 0.6 mm
RoHS/RoHS II Compliant
MSL Level = N/A



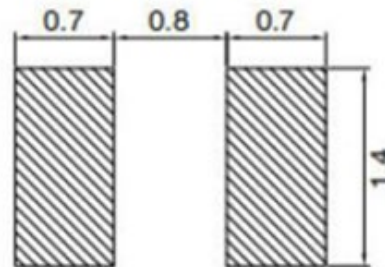
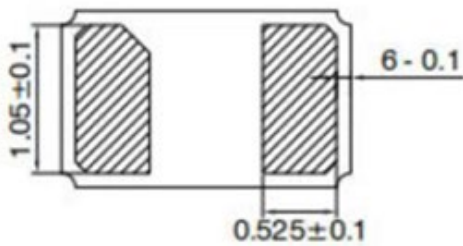
Alternative Mechanical Dimensions 2



<Connection>



<Suggested Layout>



Dimensions: mm

Sealing Method = Seam Sealing

32.768kHz SMD Crystal

ABS06

Request Samples



Check Inventory



2.0 x 1.2 x 0.6 mm
 RoHS/RoHS II Compliant
 MSL Level = N/A

Reflow Profile [JEDEC J-STD-020]

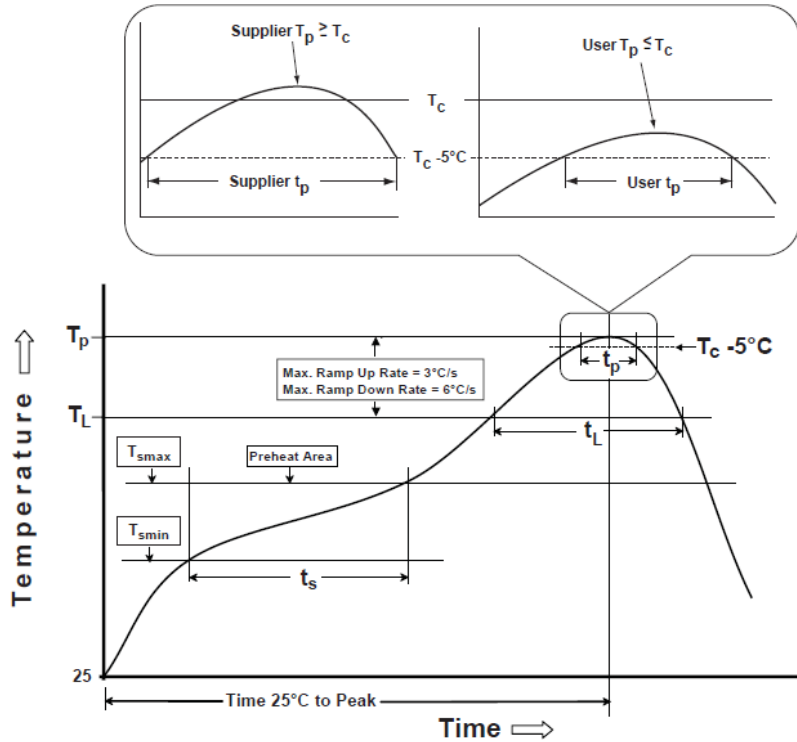


Table 1

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.



5101 Hidden Creek Ln Spicewood TX 78669
 Phone: 512-371-6159 | Fax: 512-351-8858
 For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 04-25-22

ABRACON IS
 ISO9001-2015
 CERTIFIED

