

Low Frequency Reflowable Tuning Fork Crystal

AB26TRQ

Pb in high melting temperature type solders exempt 7(a) and Pb in copper alloy up to 4% exemption 6(c) per RoHSII 2011/65/EU Annex
RoHS/RoHS II Compliant



5.2 x 1.45 x 1.45mm

Moisture Sensitivity Level (MSL) = Level 1

FEATURES:

- Miniature square-body, formed lead SMD package: 5.2 x 1.45 x 1.45mm
- Excellent shock and vibration resistance
- Reflow Capable
- Low cost for consumer applications

APPLICATIONS:

- Real time clock
- Measuring instruments
- Blue-tooth and wireless applications

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency		32.768		kHz	
Operating Temperature	-40		+85	°C	
Turnover Temperature	+20	+25	+30	°C	
Storage Temperature	-55		+85	°C	
Frequency Tolerance @+25°C	-20		+20	ppm	See options
Frequency Coefficient (β)		-0.035±10%		ppm/°C ²	
Equivalent series resistance (R1)		50	65	kΩ	
Shunt capacitance (C0)		0.9		pF	
Motional capacitance (C1)		2.1		fF	
Load capacitance (CL)		12.5		pF	See options
Drive Level			1	µW	
Aging	-3		+3	ppm	@25°C First year
Insulation Resistance	500			MΩ	

OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

AB26TRQ-32.768kHz - - -

Load Capacitance (pF)
Blank: 12.5pF
7: 7pF
9: 9pF

Freq. Tolerance
Blank: ± 20 ppm
3: ± 25 ppm
4: ± 30 ppm

Packaging
Blank: Bulk
T: Tape & Reel (2000pcs/reel)

Note: Please contact Abracon for tighter Freq. tolerance

Low Frequency Reflowable Tuning Fork Crystal

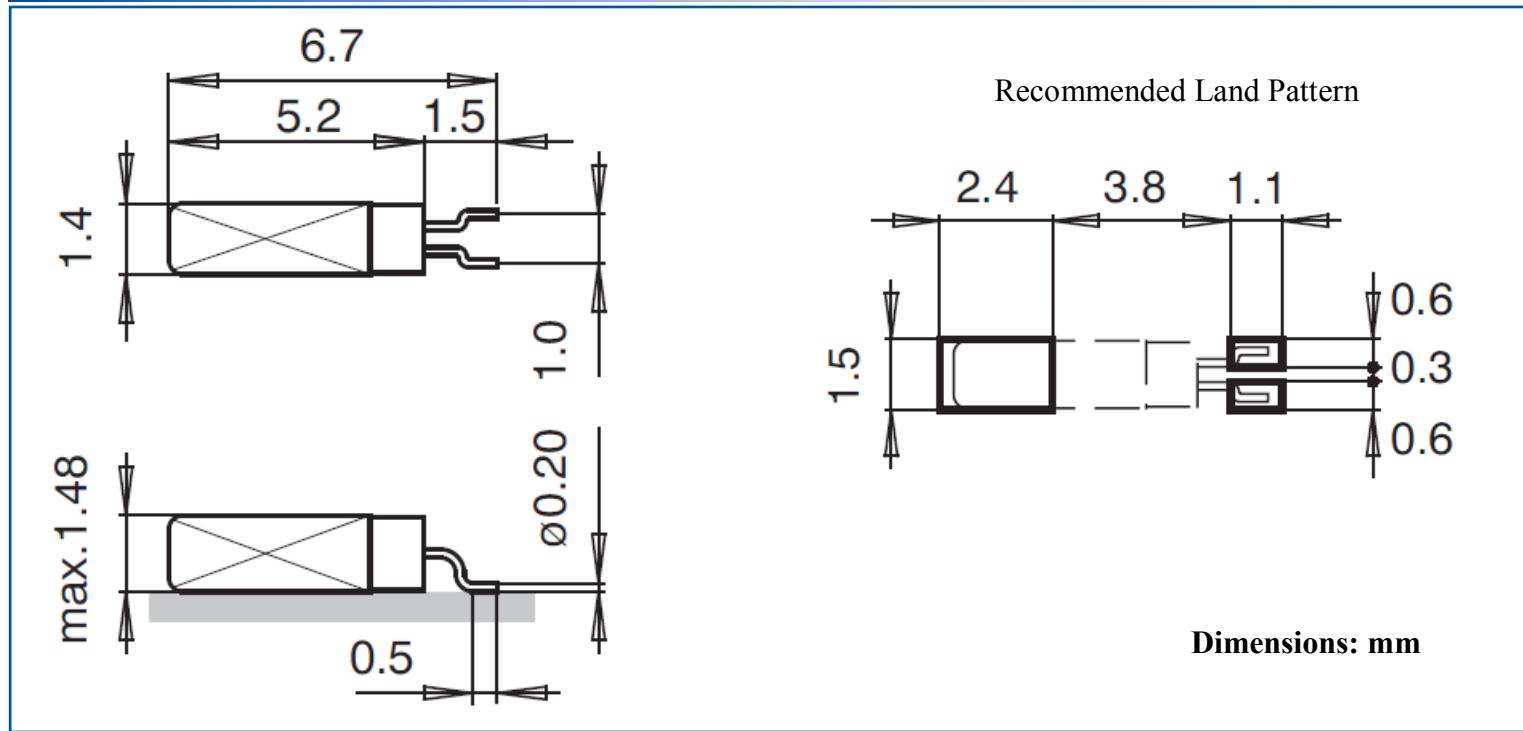
AB26TRQ

Pb in high melting temperature type solders exempt 7(a) and Pb in copper alloy up to 4% exemption 6(c) per RoHSII 2011/65/EU Annex
RoHS/RoHS II Compliant



5.2 x 1.45 x 1.45mm

OUTLINE DRAWING:



METAL HOUSING:

Gold Plated Crystal Housing



Palladium Plated Crystal (Obsolete)



Due to material availability, the current plating method utilizing Palladium (Pb) for the housing of AB26TRQ family of crystals is EOL'd. Going forward, the housing will be plated using Gold (Au). This change does not impact any electrical performance but enhances solderability and shelf life. This change is effective 07/01/2019 but please take note that during Q3-Q4 2019, AB26TRQ crystals may be shipped with either Pb or Au plating until the raw material inventory is consumed. Effective 01/01/2020, all AB26TRQ Quartz Crystals will be supplied with Au plating only. The image above reflects the cosmetic difference between two plating methodologies.

Low Frequency Reflowable Tuning Fork Crystal

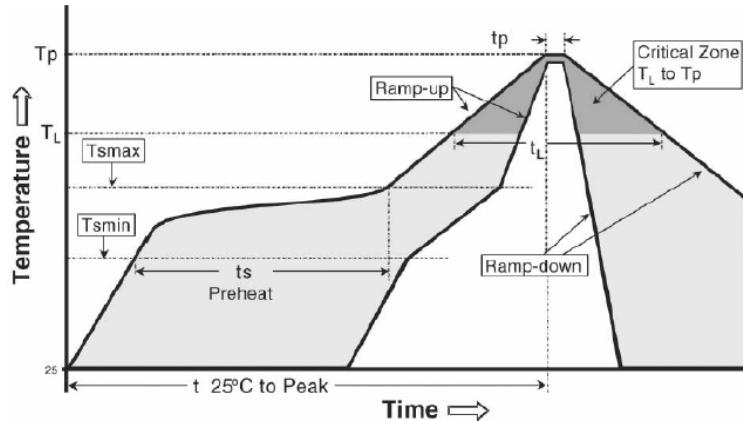
AB26TRQ

Pb in high melting temperature type solders exempt 7(a) and Pb in copper alloy up to 4% exemption 6(c) per RoHSII 2011/65/EU Annex
RoHS/RoHS II Compliant



5.2 x 1.45 x 1.45mm

RECOMMENDED REFLOW PROFILE:



Temperature Range	Symbol	Condition	Unit
Average Ramp up Rate	(Ts _{max} to Tp)	3°C/second max	°C/s
Ramp Down Rate	T _{cool}	6°C/second max	°C/s
Time 25°C at Peak Temperature	T _{to-peak}	8 minutes max	m
Preheat			
Temperature Min	T _{Smin}	150	°C
Temperature Max.	T _{Smax}	200	°C
Time T _{Smin} to T _{Smax}	T _s	60-180	Sec
Soldering above Liquidus			
Temperature Liquidus	T _L	217	°C
Time above Liquidus	t _L	60-150	Sec
Peak Temperature			
Peak Temperature	T _p	260	°C
Time within 5°C of Peak Temperature	t _p	20-40	Sec

Low Frequency Reflowable Tuning Fork Crystal

AB26TRQ

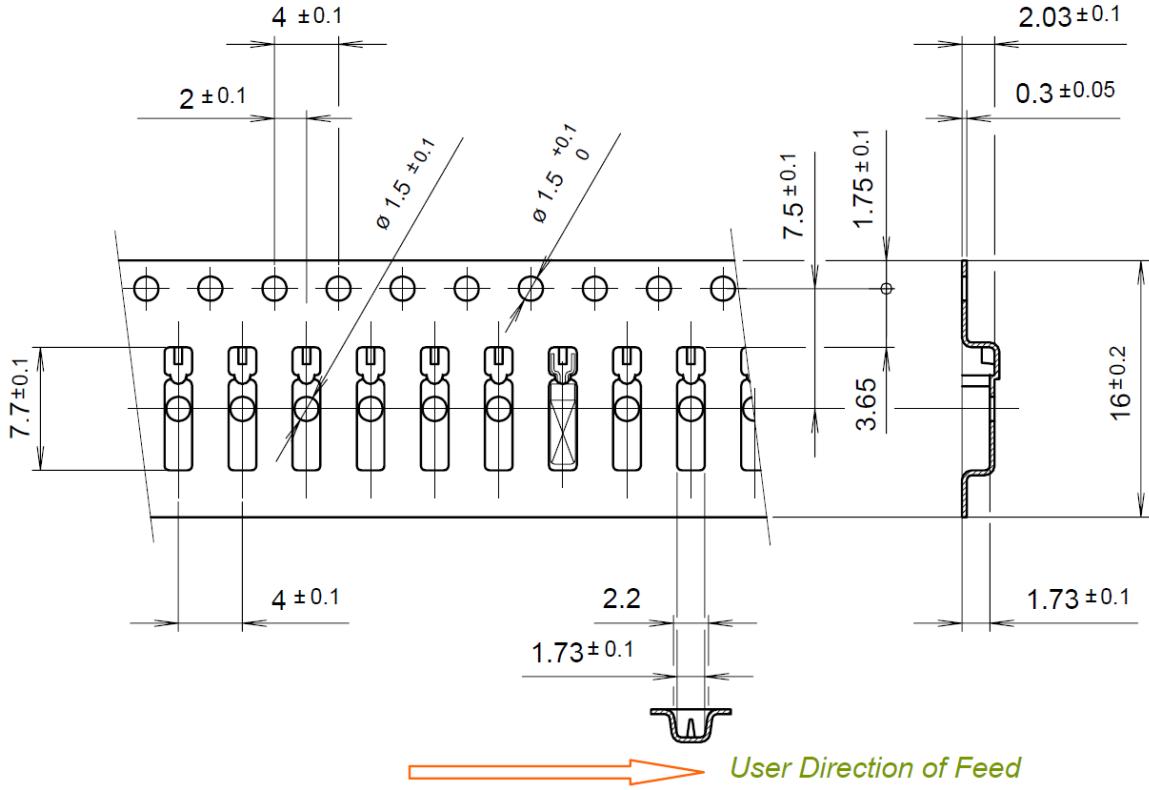
Pb in high melting temperature type solders exempt 7(a) and Pb in copper alloy up to 4% exemption 6(c) per RoHSII 2011/65/EU Annex
RoHS/RoHS II Compliant



5.2 x 1.45 x 1.45mm

➤ TAPE & REEL:

Packaging: T= Tape & Reel (2000pcs/reel)



User Direction of Feed

Dimensions: mm

ATTENTION: Abracan LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracan'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 Abracan LLC is required. Please contact Abracan LLC for more information.

 **ABRACON**[®]
LLC

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

REVISED: 06-25-19

ABRACON IS
ISO9001-2015
CERTIFIED

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ABRACON:](#)

[AB26TRQ-32.768kHz-T](#)