

# Low Frequency Reflowable Tuning Fork Crystal



5.2 x 1.45 x 1.45mm

**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**

**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:

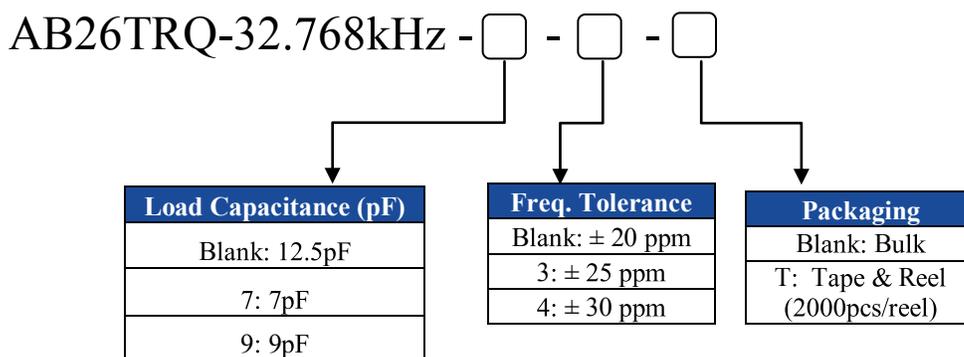
- Real time clock
- Measuring instruments
- Blue-tooth and wireless applications

## 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 <sup>2</sup>	
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)



Note: Please contact Abracon for tighter Freq. tolerance

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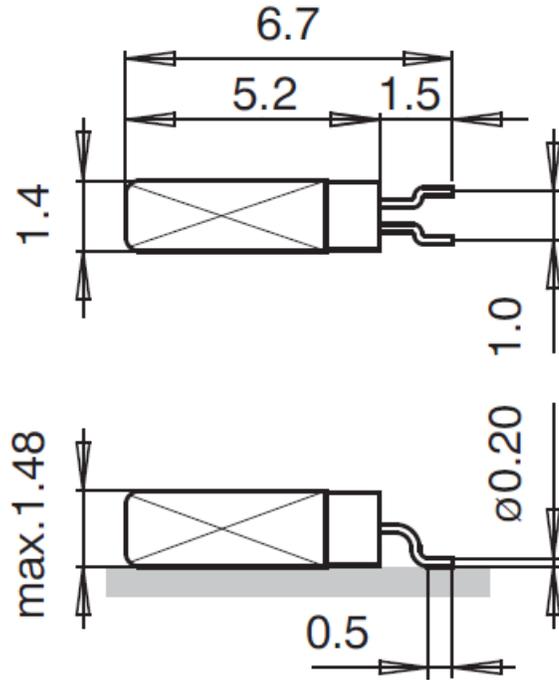
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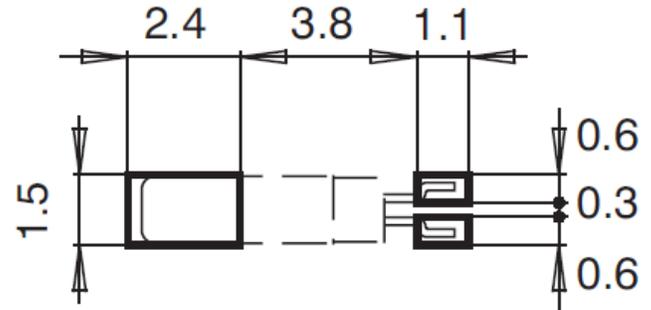


5.2 x 1.45 x 1.45mm

## OUTLINE DRAWING:



## Recommended Land Pattern



Dimensions: mm

## METAL HOUSING:

### Gold Plated Crystal Housing



### Palladium Plated Crystal (Obselete)



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.

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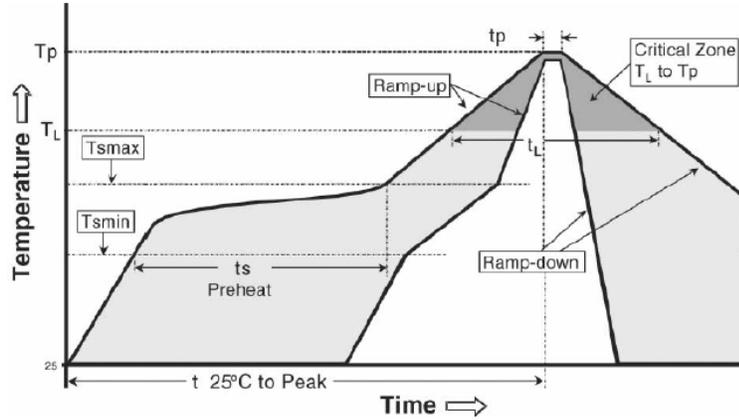
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## RECOMMENDED REFLOW PROFILE:



Temperature Range	Symbol	Condition	Unit
Average Ramp up Rate	( $T_{s_{max}}$ to $T_p$ )	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
<b>Preheat</b>			
Temperature Min	$T_{s_{min}}$	150	°C
Temperature Max.	$T_{s_{max}}$	200	°C
Time $T_{s_{min}}$ to $T_{s_{max}}$	$T_s$	60-180	Sec
<b>Soldering above Liquidus</b>			
Temperature Liquidus	$T_L$	217	°C
Time above Liquidus	$t_L$	60-150	Sec
<b>Peak Temperature</b>			
Peak Temperature	$T_p$	260	°C
Time within 5°C of Peak Temperature	$t_p$	20-40	Sec

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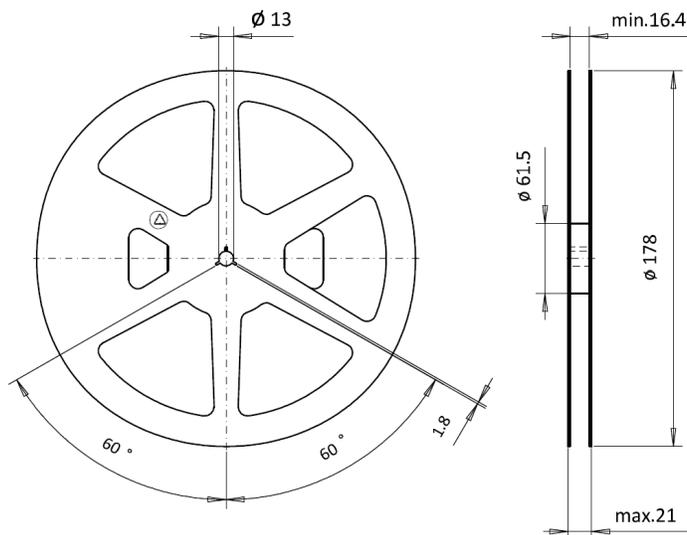
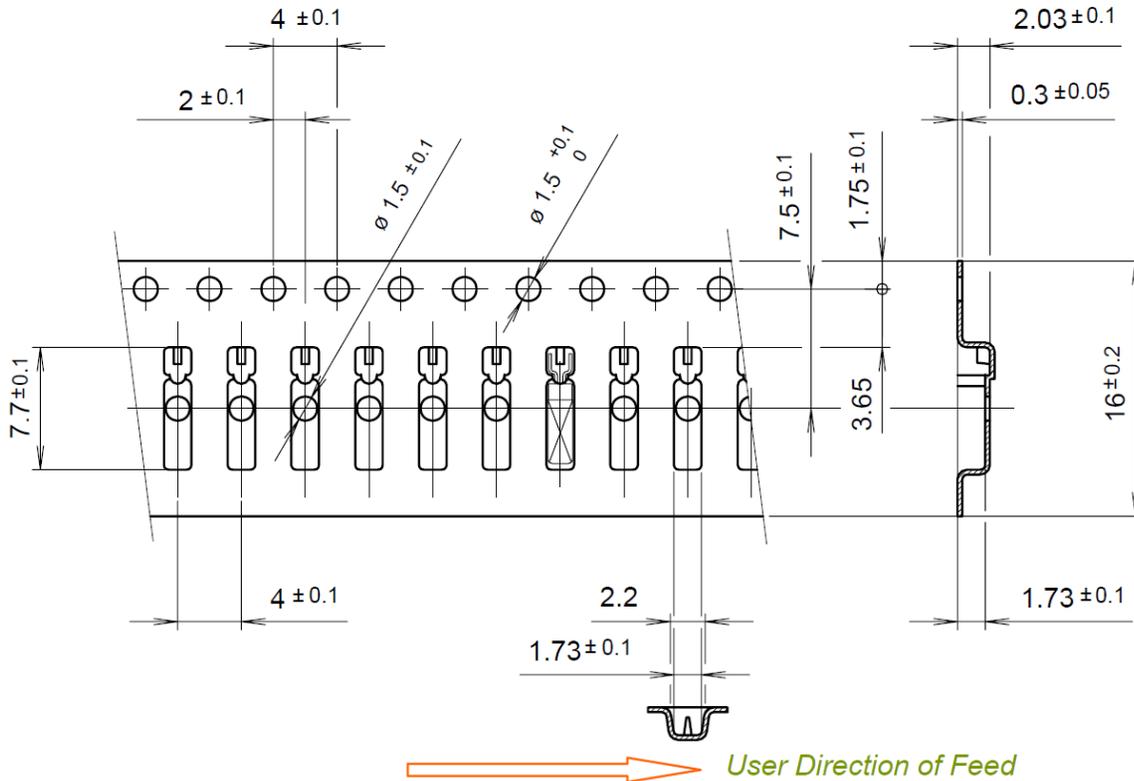
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## TAPE & REEL:

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



**Dimensions: mm**

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