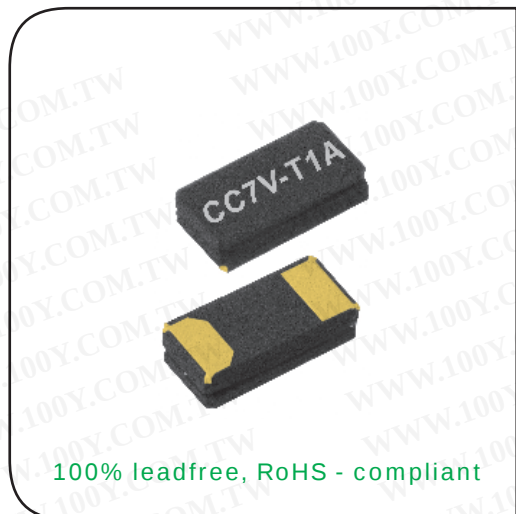
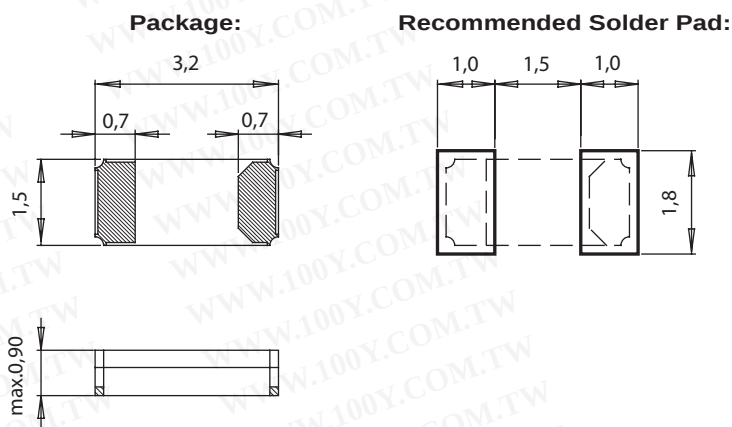


CC7V-T1A

Tuning Fork Crystal 32.768 kHz



DIMENSIONS



All dimensions in mm typical

Miniature SMT ceramic package
Package height 0.90 mm
SMD-package in Tape and Reel
Ind. and Ext. temperature ranges
High stability
Low aging
Low power consumption
High shock and vibration resistance

DESCRIPTION:

This SMD ceramic package has been specially designed for miniature telecom and portable applications. A special crystal manufacturing process is used to achieve improved electrical characteristics and a miniaturized blank size.

The crystals are supplied in special trays (200 crystals per tray).

For pick-and-place equipment, the parts are available in 12 mm tape:

7" (178 mm) reel with 3'000 crystals

13" (330 mm) reel with 14'000 crystals

ELECTRICAL CHARACTERISTICS AT 25°C:

勝特力材料 886-3-5753170
 胜特力电子(上海) 86-21-34970699
 胜特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Nominal Frequency	¹⁾ F _L	32.768	kHz
Load capacitance	²⁾ C _L	7.0 / 9.0 / 12.5	pF
Frequency tolerance	ΔF/F	+/-20	ppm
	³⁾ ΔF/F	+/-30	ppm
	ΔF/F	+/-100	ppm
Series resistance typ./max.	R _S	50 / 70	kΩ
Motional capacitance typ.	C ₁	3.7	fF
Static capacitance typ.	C ₀	1.2	pF
Drive level max.	P	1.0	μW
Insulation resistance min.	R _i	500	MΩ
Aging first year max.	ΔF/F	+/-3	ppm
Turnover temperature	T ₀	25 +/-5	°C
Frequency vs. temperature	ΔF/F ₀	-0.035 ppm/°C ² (T - T ₀) ² +/-10%	ppm

1) Other frequencies on request.

2) Other load capacitances on request.

3) Tighter and wider frequency tolerances on request.

STANDARD FREQUENCIES:

Frequency kHz
32.768
Other frequencies on request

**ENVIRONMENTAL
CHARACTERISTICS:**

		Conditions	Max. Dev.
Storage temp. range		-55 to +125°C	
Industrial operating temp. range		-40 to +85°C	
Extended operating temp. range		-55 to +125°C	
Shock resistance	$\Delta F/F$	5000 g, 0.3 ms, 1/2 sine	+/-5 ppm
Vibration resistance	$\Delta F/F$	20 g / 10–2000 Hz	+/-5 ppm

**TERMINATIONS AND
PROCESSING:**

Type	Termination	Processing
CC7V-T1A	For SMD mounting Au flashed pads	Reflow soldering 260°C / 20 s max.

**PART NUMBER/
ORDERING INFORMATION
EXAMPLE:**

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 勝特力电子(深圳) 86-755-83298787
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<u>Crystal package</u> C = Crystal in ceramic package	<u>Package lid</u> C = Ceramic lid	<u>Package size</u> 7 = 3.2 x 1.5 x 0.90 mm	<u>Blank</u> V = Tuning fork	<u>Frequency</u> 32.768 kHz	<u>Load capacitance</u> 9.0 pF	<u>Frequency tolerance</u> +/-20 ppm
<u>Package pad form</u> A = Pads on both ends	<u>Pad plating</u> 1 = Au flashed pads	<u>Package type</u> T = For SMD mounting				

All specifications subject to change without notice. 09.09



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