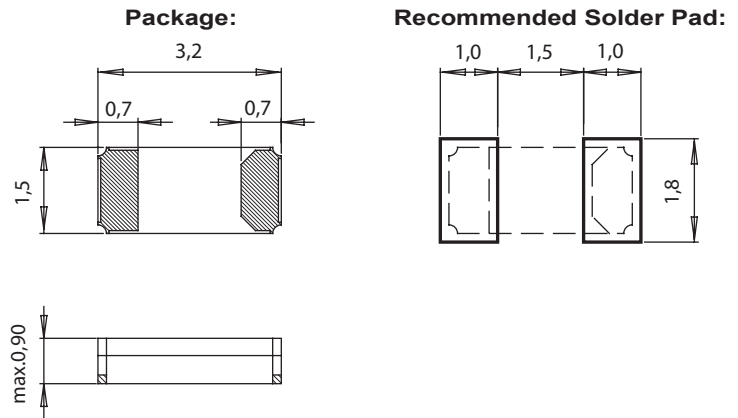


CC7A-T1A

AT Crystal 24 MHz – 30 MHz



DIMENSIONS



All dimensions in mm typical

Suitable for implantable medical applications
Small SMT ceramic package
Package height 0.9 mm
Fundamental mode frequencies
SMD-package in Tape and Reel
Ind. and Ext. temperature ranges
High stability, low ageing
High shock and vibration resistance

DESCRIPTION:

This SMD ceramic package has been specially designed for small, implantable medical, industrial, telecom and electronic applications. All frequencies are generated in fundamental mode. The crystals are supplied in special trays (200 crystals per tray). For pick-and-place equipment, the parts are available in 12 mm tapes:
 7" (178 mm) reel with 3'000 crystals
 13" (330 mm) reel with 14'000 crystals

ELECTRICAL CHARACTERISTICS AT 25°C:

Frequency Range	F_L	24–30	MHz
Load capacitance ¹⁾	C_L	20.0	pF
Frequency tolerance at 25°C ²⁾	$\Delta F/F$	+/-50	ppm
Frequency versus temperature ³⁾ B: -40°C to + 85°C C: -55°C to +125°C	$\Delta F/F_0$	+/-50 +/-100	ppm
Drive level typ/max	P	100/250	μW
Insulation resistance min.	R_i	500	MΩ

1) Other load capacitances on request; e.g. C_L : 3.0 pF / 9.0 pF / 16.0 pF

2) Tighter and wider frequency tolerances on request; e.g. +/-20 ppm

3) Tighter thermal stability on request; e.g. +/-10 ppm from 0°C to +55°C

Frequency [MHz]	R_s [Ω] typ/max	C_1 [fF] typ/max	C_0 [pF] typ
24 to < 30	60/100	1/3	0.7

STANDARD FREQUENCIES:

Frequency MHz			
24.0000	25.0000	26.0000	26.5000
Other frequencies between 24 MHz and 30 MHz on request			

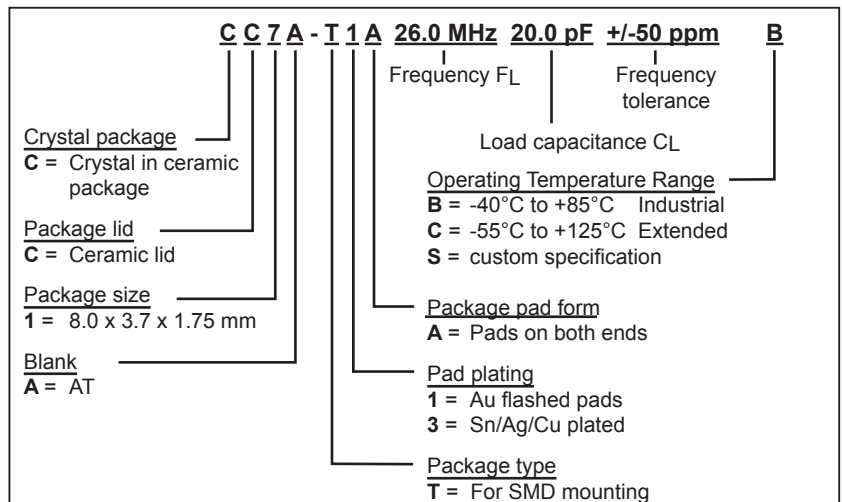
**ENVIRONMENTAL
CHARACTERISTICS:**

		Conditions	Max. Dev. [ppm]
Storage temp. range		-55 to +125°C	
B - Industrial operating temp. range		-40 to +85°C	
C - Extended operating temp. range		-55 to +125°C	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	+/-5
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	+/-5

**TERMINATIONS AND
PROCESSING:**

Type	Termination	Processing
CC1A-T1A	For SMD mounting Au flashed pads	Reflow soldering 260°C / 20 s max.
CC1A-T3A	For SMD mounting Sn/Ag/Cu plated	Reflow soldering 260°C / 20 s max.

**PART NUMBER/
ORDERING INFORMATION
EXAMPLE:**



All specifications subject to change without notice. 04.09

SCREENING:

Medical, Automotive and Avionics testing available on request



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