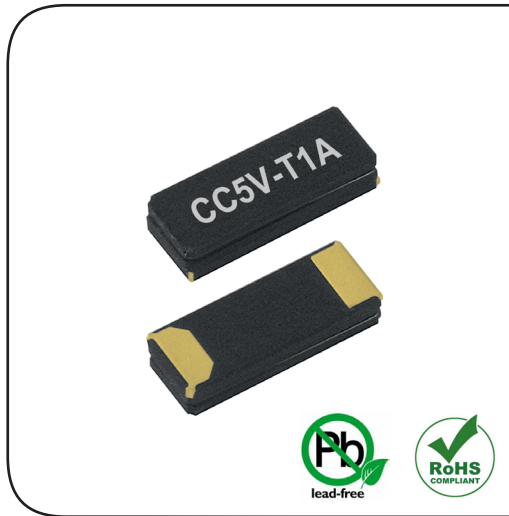
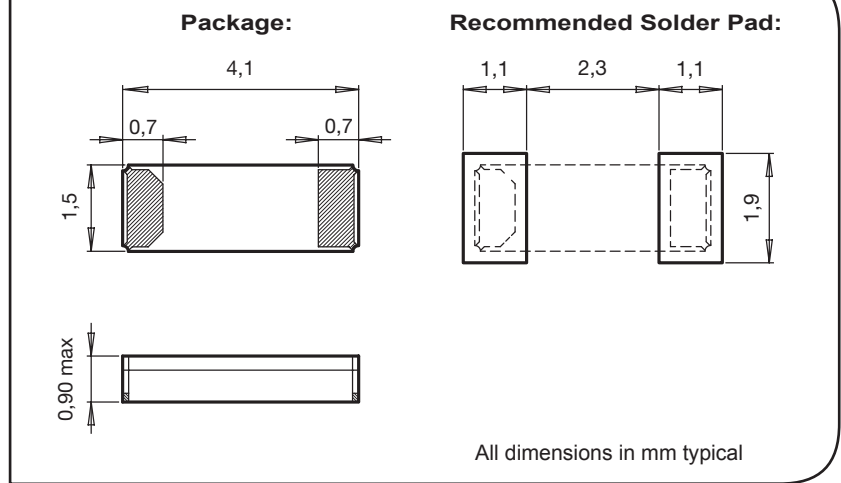


CC5V-T1A

Tuning Fork Crystal 32.768 kHz



DIMENSIONS



APPLICATIONS

Metering
Industrial
Automotive
Health Care
Medical Implantable
Harsh Environments

DESCRIPTION

The CC5V-T1A is a low frequency SMT Quartz Crystal Unit that incorporates a tuning fork Quartz Crystal Resonator. It operates under vacuum in a hermetically sealed ceramic package with ceramic lid.

CC5V-T1A is compatible with other suppliers' same footprint crystals.

FEATURES

Mature product for harsh environments.
Outstanding hermetic sealing with gold-tin preform.
High stability and low aging guaranteed by hermetic sealing.
Available for extended operating temperature range.
High shock and vibration resistant.
100% Pb-free, RoHS-compliant.

ELECTRICAL CHARACTERISTICS AT 25°C

Standard Frequencies 32.768 kHz / 102.400 kHz ¹⁾	F_L	32.768	kHz
Load capacitance ²⁾	C_L	6.0 / 7.0 / 9.0 / 12.5	pF
Frequency tolerance ³⁾	$\Delta F/F$	±20	ppm
	$\Delta F/F$	±100	ppm
Series resistance typ./max.	R_S	50 / 70	kΩ
Motional capacitance typ.	C_1	2.8	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.	$\Delta F/F$	±3	ppm
Turnover temperature	T_0	25 ±5	°C
Frequency vs. temperature	$\Delta F/F_0$	$-0.035 \text{ ppm}/^\circ\text{C} \cdot (T - T_0)^2 \pm 10\%$	ppm

- 1) Other frequencies on request.
2) Other load capacitances on request.
3) Tighter frequency tolerances on request.

STANDARD FREQUENCIES

Frequencies
32.768 kHz / 102.400 kHz
Other frequencies on request

ENVIRONMENTAL CHARACTERISTICS

		Conditions	Max. Dev.
Storage temp. range		-55 to +125°C	
TA Operating temperature range		-40 to +85°C	
TB Extended oper. temp. range		-40 to +125°C	
TC Extended oper. temp. range		-55 to +125°C	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	±5 ppm
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	±5 ppm

TERMINATIONS AND PROCESSING

Type	Termination	Processing
CC5V-T1A	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s
CC5V-T2A	SnPb plated pads available only on request	

ORDERING INFORMATION

<p style="text-align: center;">C C 5 V - T 1 A</p> <p>Ceramic package _____</p> <p>Ceramic lid _____</p> <p>Package size _____ 5 = 4.1 x 1.5 x 0.90 mm</p> <p>Tuning fork _____</p> <p>SMT Package _____</p> <p>Pads _____ 1 = Au flashed pads 2 = SnPb plated pads</p> <p>Pads on both ends _____</p>	<p style="text-align: center;">32.768 kHz 12.5 pF ±20 ppm TA QC</p> <p>Frequency F_L _____</p> <p>Load capacitance C_L _____ 6.0 pF 7.0 pF 9.0 pF 12.5 pF Other C_L on request</p> <p>Frequency tolerance _____ ±20 ppm ±100 ppm Tighter freq. tolerances on request</p> <p>Temperature range _____ TA = -40 to +85°C (Standard) TB = -40 to +125°C TC = -55 to +125°C</p> <p>Qualification _____ QC = Commercial Grade (Standard) QM = Medical Grade</p>
--	---

A unique part number will be generated for each product specification, i.e:	
20xxxx-MG01	1'000 pcs (in 12 mm tape on 7" reel)
20xxxx-MG03	3'000 pcs (in 12 mm tape on 7" reel)
20xxxx-PG14	14'000 pcs (in 12 mm tape on 13" reel)

All specifications subject to change without notice.



Micro Crystal AG
Muehlestrasse 14
CH-2540 Grenchen
Switzerland

Phone +41 32 655 82 82
Fax +41 32 655 82 83
sales@microcrystal.com
www.microcrystal.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Crystals](#) category:

Click to view products by [Micro Crystal](#) manufacturer:

Other Similar products are found below :

[MC405 32.0000K-R3:PURE SN](#) [7B-27.000MBBK-T](#) [MP1-8.0 99-BU](#) [9B-15.360MBBK-B](#) [PTX-A2JM-10.000M](#) [9C-7.680MBBK-T](#) [H10S-12.000-18-EXT-TR](#) [R38-32.768-12.5-5PPM-NPB](#) [BTD1062E05A-513](#) [21U15A-21.4MHZ](#) [RTX-781DF1-S-20.950](#) [LFXTAL066198Cutt](#) [9C-14.31818MBBK-T](#) [A-11.000MHZ-27](#) [SPT2A-.032768B](#) [SPT2A.032768G](#) [SSPT7F-9PF20-R](#) [FX325BS-38.88EEM1201](#) [MP-1-25.000MHZ-3L](#) [MP-1-6.000MHZ](#) [LFXTAL065253Cutt](#) [LFXTAL066431Cutt](#) [XT9S20ANA14M7456](#) [XT9SNLANA16M](#) [646G-24-2](#) [7A-24.576MBBK-T](#) [7B-30.000MBBK-T](#) [7A-14.31818MBBK-T](#) [6526-202-1501](#) [BTJ120E02C](#) [SG636PCE-20.000MC](#) [3404](#) [CM315D32768EZFT](#) [C1E-24.000-7-2020-R](#) [C1E-19.200-12-1530-X-R](#) [C1E-16.000-12-1530-X-R](#) [ABM11-16.000MHZ-9-B1U-T](#) [FL5000014](#) [EUCA18-3.1872M](#) [425F35E027M0000](#) [17196](#) [ABM3-13.52313MHZ-10-B4Y-T](#) [MS3V-T1R-32.768kHz-7pF-20PPM-TA-QC-Au](#) [VXM7-1C1-16M000](#) [MS1V-T1K-32.768kHz-10pF-20PPM-TA-QC-Au](#) [MS3V-T1R-32.768kHz-9pF-20PPM-TA-QC-Au](#) [ECS-80-18-30-JGN-TR](#) [17000](#) [17301](#)