

# Crystal Units

## 水晶振動子

### Tuning Fork Crystal 32.768KHZ 時計用水晶振動子

CM7V-T1A



CM7V-T1A 0.4



### Feature 特徴

3.2mmx1.5mm Size: Tuning Fork Crystal 32.768kHz by ceramic package.

3.2mmx1.5mmサイズ: 時計用水晶振動子 32.768kHzのセラミック・パッケージ版です

Low package height(0.65mm) and Ultra low package height(0.38mm) is available.

薄型0.65mmT、超薄型0.38mmTタイプをご提供させていただきます

High stability, Low aging, Low power consumption, High shock and vibration resistance.

高安定性、エージング特性、電力消費特性、耐衝撃特性、耐振動特性などで優れています

Product supply from **MICRO CRYSTAL SWITZERLAND.**

この製品は、マイクロクリスタル社から提供されております



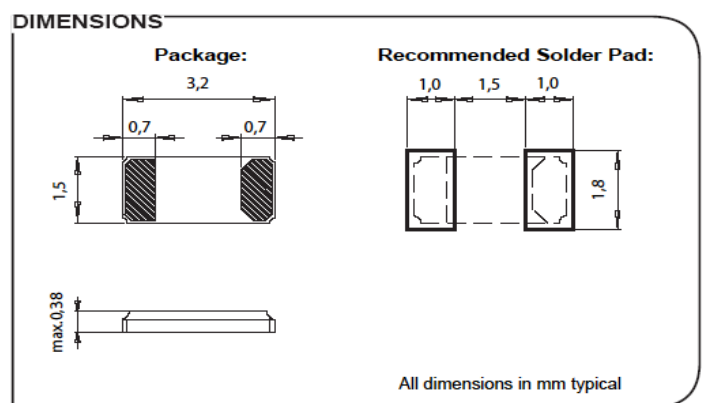
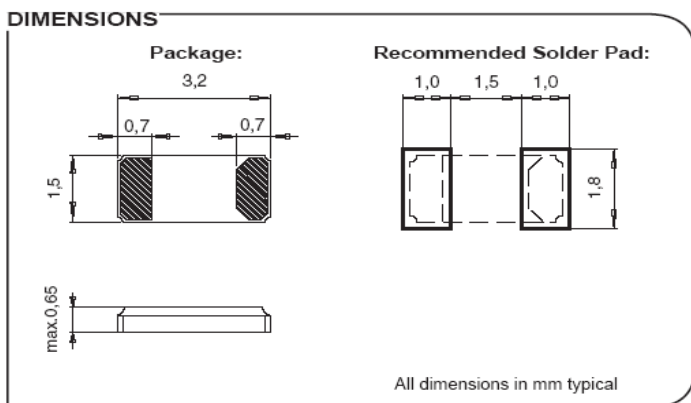
### Specification 仕様

			CM7V-T1A	CM7V-T1A 0.4	
Nominal Frequency	公称周波数	$F_L$	32.768	32.768	kHz
Load capacitance	負荷容量	$C_L$	7.0/9.0/12.5	7.0/9.0/12.5	pF
Frequency tolerance	周波数偏差	$\Delta F/F$	+/-20	+/-20	ppm
		$\Delta F/F$	+/-100	+/-100	ppm
Series resistance	直列抵抗(typ./max.)	$R_s$	50/70	55/80	k $\Omega$
Motional capacitance	直列容量(typ.)	$C_1$	3.7	4.4	fF
Static capacitance	並列容量(typ.)	$C_0$	1.2	1.6	pF
Drive level max.	ドライブレベル	P	1.0	0.5	$\mu$ W
Insulation resistance	絶縁抵抗(min.)	$R_i$	500	500	M $\Omega$
Aging first year max.	初年度エージング	$\Delta F/F$	+/-3	+/-3	ppm
Turnover temperature	変曲点温度	$T_0$	25+/-5	25+/-5	

Other frequencies and load capacitance on request他の周波数や負荷容量は、お問合せ下さい。

Tighter and wider frequency tolerances on request.偏差の縮小、拡大についてはお問合せ下さい。

### Case Dimensions ケース寸法



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### Product Description and Ordering Information 製品内容、及び、型名情報

**CM7V-T1A 32.768kHz 12.5pF +/-20ppm TA QC**

Frequency  $f_L$   
 $C_L$  Load Capacitance  
 7.0 pF  
 9.0 pF  
 12.5 pF  
Frequency tolerance  
 +/- 20 ppm  
 +/- 100 ppm

Temperature Range  
 TA = -40 to 85°C (Standard)  
 TB = -40 to +125°C  
 TC = -55 to +125°C

Optional:  
 if not defined,  
 'Standard' will apply

Qualification  
 QC = Commercial (Standard)  
 QA = Automotive AEC-Q200

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

**CM7V-T1A 0.4 32.768kHz 12.5pF +/-20ppm TA QC**

Frequency  $f_L$   
 $C_L$  Load Capacitance  
 7.0 pF  
 9.0 pF  
 12.5 pF  
Frequency tolerance  
 +/- 20 ppm  
 +/- 100 ppm

Temperature Range  
 TA = -40 to 85°C (Standard)

Optional:  
 if not defined,  
 'Standard' will apply

Qualification  
 QC = Commercial (Standard)

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