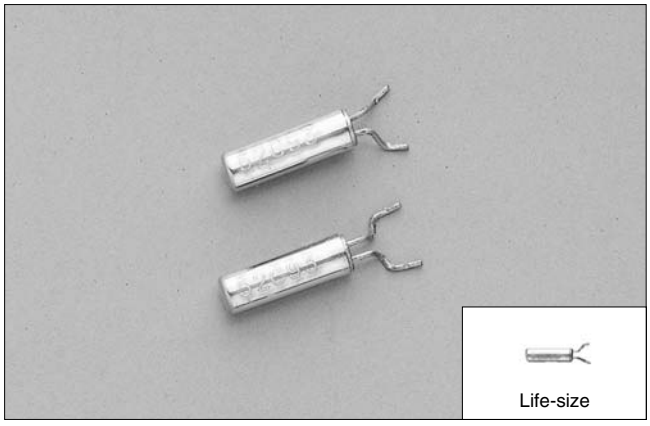
TUNING FORK CRYSTAL UNITS (SMD • Cylinder Type)

CITIZEN Micro HumanTech

CMR200T • CMR250T

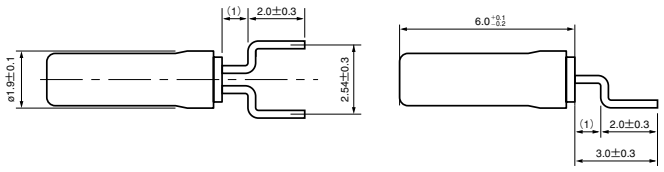
2000pcs/reel



■FEATURES

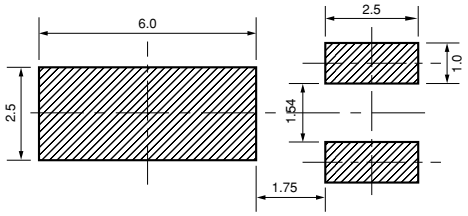
- Lead formed SMD type with embossed tape. Automatic mounting and reflowable Type.
- Most appropriate for clock source for portable and other various equipment with low power consumption.

■DIMENSION [mm]



CMR200T, CMR250T

■SOLDER PAD LAYOUT [mm]



CMR200T, CMR250T

■STANDARD SPECIFICATIONS

Item	Model	CMR200T	CMR250T	Conditions
Nominal Frequency	f_0	32.768kHz	30kHz～100kHz	Need to contact us for the available frequency in CMR250T
Frequency Tolerance	$\triangle f/f_0$	±20ppm	±30ppm	at 25˚C
Load capacitance	C_L	12.5pF		Need to specify your requirement
Operating Temperature Range	T_{OPR}	−40℃～+85℃		
Storage Temperature Range	T_{STR}	−55℃～+125℃		
Turnover Temperature	T_M	25℃±5℃		See figure 2 in P4
Temperature Coefficient	β	−0.034±0.006ppm/℃^{2}		
Motional (series) resistance	R_1	50KΩMax.		at 25˚C
Level of drive	D_L	1 μW Max.		
Aging (first year)	$\triangle f/f_0$	±3ppm Max.	±5ppm Max.	25℃±3℃
Quality Factor	Q	70000 Typ.	70000 ～ 100000 Typ.	Depend on frequency
Shunt capacitance	C_0	1.35pF Typ.	0.8pF ～ 1.7pF Typ.	Depend on frequency

KHz CRYSTAL Part Numbering System

Example Part Number:

CM200S 32.768K D Z F -UT

Product Family

For example:

CFS308
CFS206
CFS145
CFV206
CMR200T
CMR250T
CM200S
CM250S
CM130
CM519
CM415
CM315

Frequency

Numerical Value, maximum characters as follows:

XXX.XXXXXX
followed by "K" for KHz

Packaging method

TR	Tape & Reel
B	Bulk
-UT	RoHS Compliant Tape & Reel
-UB	RoHS Compliant Bulk

Frequency Tolerance [at 25C]

A	+/-30ppm	(Standard: other than 32.768KHz)
B	+/-50ppm	•
C	+/-100ppm	•
D	+/-20ppm	(Standard: 32.768KHz)
E	+/-10ppm	•
F	+/-15ppm	•
G	+/-25ppm	•

•Consult Citizen

Load Capacitance

A	Series	I	16.0pf	Q	10.0pf
B	6.0pf	J	18.0pf	R	50.0pf
C	9.0pf	K	20.0pf	S	11.0pf
D	9.5pf	L	22.0pf	T	14.0pf
E	12.0pf	M	25.0pf	U	17.0pf
F	12.5pf (Std)	N	30.0pf	V	8.0pf
G	13.0pf	O	32.0pf		
H	15.0pf	P	33.0pf		

...others to be assigned

Frequency Stability

Z (Standard for all KHz frequencies)