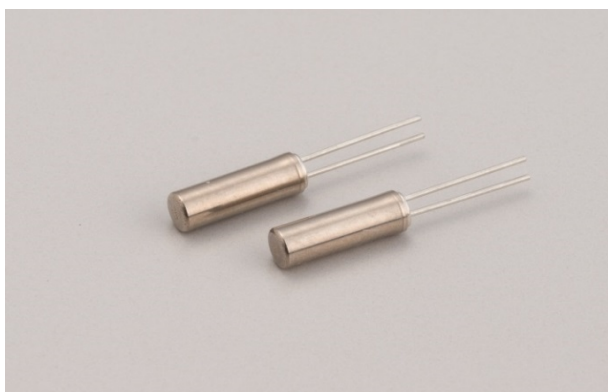


TUNING FORK CRYSTAL UNIT (Cylinder Type)

RoHS compliant / Pb free

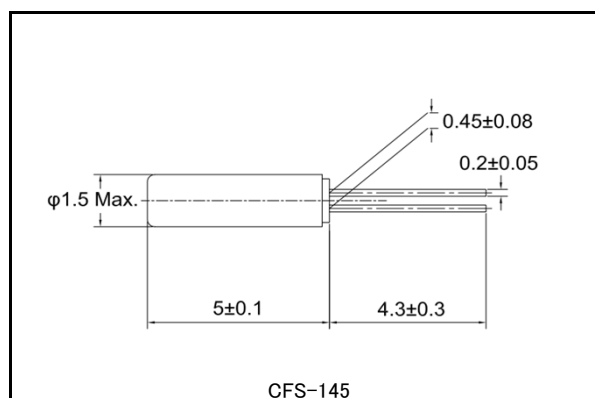
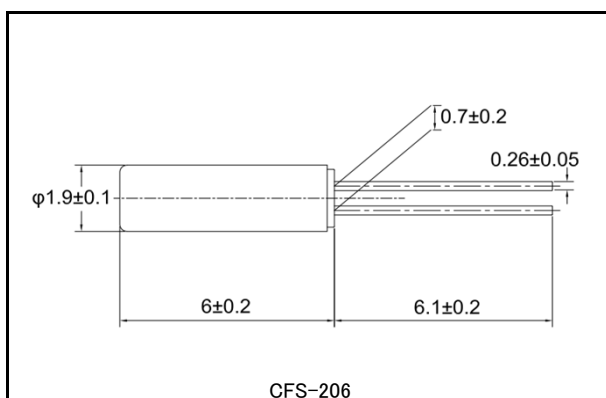
CFS-206・CFS-145



FEATURES

- Frequency range : 32.768kHz
- External dimensions (mm)
CFS-206 Φ : 2.0 x L : 6.2
CFS-145 Φ : 1.5 x L : 5.1
- Applications
Watch / Clock / Security devices /
Consumer products

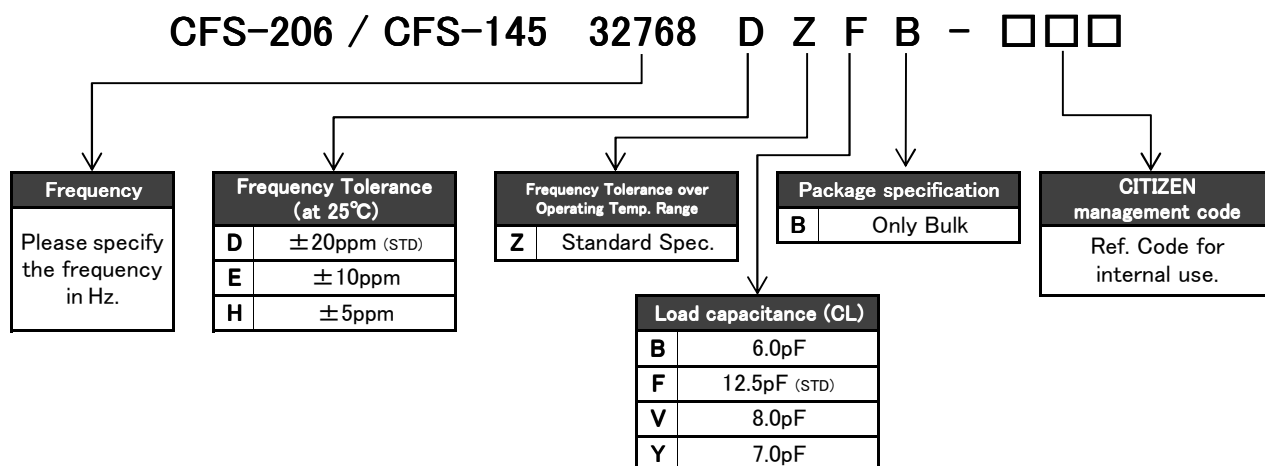
DIMENSION [mm]



STANDARD SPECIFICATIONS

Item	Model	CFS-206	CFS-145	Conditions
Nominal Frequency	f_0	32.768kHz		
Frequency Tolerance	$\Delta f/f_0$	$\pm 5\text{ppm} / \pm 10\text{ppm} / \pm 20\text{ppm}$		at 25°C
Load capacitance	C_L	6.0pF / 7.0pF / 8.0pF / 12.5pF		Please specify your requirement
Operating Temperature Range	T_{OPR}	-20°C ~ +70°C		
Storage Temperature Range	T_{STR}	-40°C ~ +85°C		
Turnover Temperature	T_M	25°C $\pm$ 5°C		
Temperature Coefficient	β	$-0.034 \pm 0.006\text{ppm}/^\circ\text{C}^2$		
Motional (series) resistance	R_1	35K Ω Max.	40K Ω Max.	at 25°C
Level of drive	D_L	1 μ W Max.		
Aging (first year)	$\Delta f/f_0$	$\pm 3\text{ppm}$ Max.		25°C $\pm$ 3°C
Shunt capacitance	C_0	1.2pF Typ.	1.0pF Typ.	

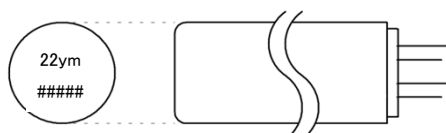
■ PART NUMBERING SYSTEM



*Please contact us for specifications available.

■ Part Marking [standard]

CFS-206



22 : Manufacture's ID Code

y : The last digit of production year

m : Production month (See Table.1)

: Production Lot No.

Table.1

Month	Jan	Feb	...	Sep	Oct	Nov	Dec
Code	1	2	...	9	X	Y	Z

CFS-145



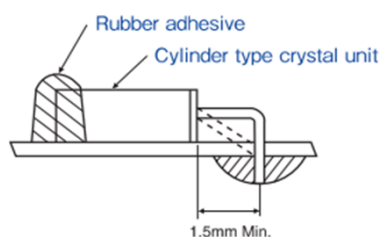
No marking

■ Handling Notes

Mounting

Soldering the body of cylinder type crystal unit must be strictly avoided as it may cause significant deterioration in characteristics of the product.

Rubber adhesive is recommended for mounting.



Bending Lead

Hold the body of crystal unit by hand, and the part to be bent with tweezers leaving more than 1.5mm of lead from the body case. (3.0mm is recommended)

Bend the lead 90° holding with the tweezers. Pulling the lead strongly may crack the hermetic seal glass at the root of the lead and may cause the airtightness and the characteristics to deteriorate.

