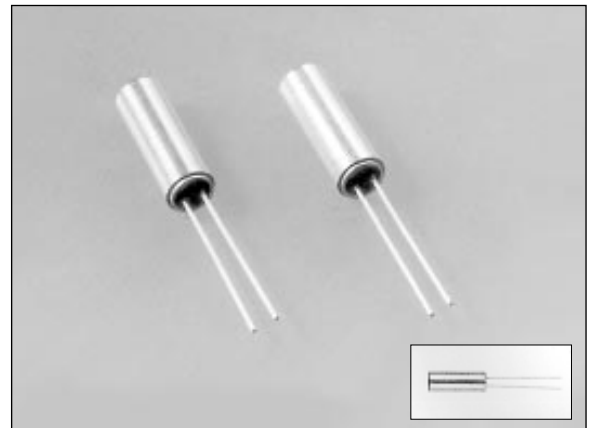


## TEMPERATURE SENSING CRYSTAL

# HTS-206

- Crystal used to sense the change in temperature.
- 2mm in diameter and 6mm in length.
- Good linearity frequency and temperature.
- Low frequency (40KHz) enables low current consumption.
- Wide temperature range (-40 to +85°C).
- Suitable for DTCXO and temperature equipment.



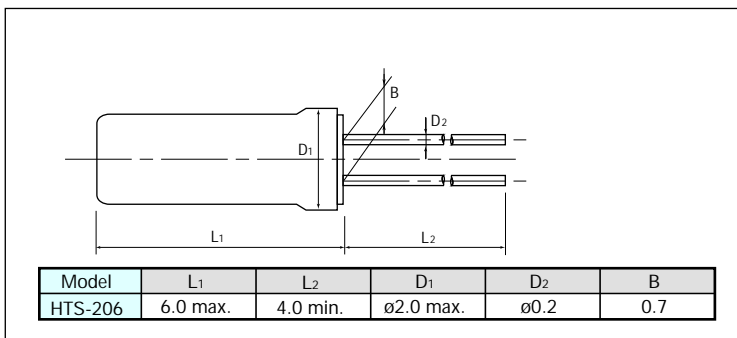
Actual size

### Specifications (characteristics)

Item	Symbol	Specifications	Remarks
Nominal frequency	$f_0$	40kHz	
Temperature range	Storage temperature	$T_{STG}$	-55°C to +125°C
	Operating temperature	$T_{OPR}$	-40°C to +85°C
Drive level	Maximum	GL	1.0 $\mu$ W max.
	Recommended	DL	0.1 $\mu$ W typ.
Frequency tolerance (standard)	$\Delta f/f$	$\pm 2\%$	$T_a = 25^\circ\text{C}$ , $DL = 0.1\mu\text{W}$
Temperature coefficient	1st	$\alpha$	$-29.6 \times 10^{-6}/^\circ\text{C}$ [ $\pm 2\%$ ]
	2nd	$\beta$	$-6.4 \times 10^{-8}/^\circ\text{C}^2$ [ $\pm 8\%$ ]
	3rd	$\gamma$	$-1.5 \times 10^{-10}/^\circ\text{C}^3$ max.
Series resistance	$R_1$	30 K $\Omega$ max.	$T_a = 25^\circ\text{C}$ , $DL = 1.0\mu\text{W}$
Motion capacitance	$C_1$	2.0 fF typ.	
Shunt capacitance	$C_0$	0.9 pF typ.	
Insulation resistance	IR	500 M $\Omega$ min.	
Aging	$f_a$	$\pm 3$ ppm/year max.	$T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$
Shock resistance	S.R.	$\pm 3$ ppm max.	Three drops on a hard board from 50 cm

### External dimensions

(Unit: mm)



### Temperature characteristic

