



Data Sheet


 telephone
949 252 0522


BACK

Product Category: Quartz Crystals

Series Number	Package	Description	Last Modified
121 ~ 122	3x8, 2x6	Low Frequency Quartz	Sept 01. 2006

Quartz Crystal FEATURES

- Excellent shock and vibration characteristics
- Miniature size
- Long term stability
- Cost effective
- RoHs / Lead Free compliant



OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS		121 Series	122 Series	UNITS
Size (Figure No.)	-	3x8 (1)	2x6 (2)	-
Frequency Range	f_O	38.4 ~ 76.8		KHz
Frequency Tolerance	$\Delta f/f_o$	± 10 or ± 20		PPM
Load Capacitance (typ.)	C_L	12.5 (typ.)		pF
Drive Level (max.)	D_L	1.0 ± 0.2		μW
Resistance (at Series Resonance)	R_1	30 max.	40 max.	Kohm
Q-Factor	Q	80,000 (typ.), 50,000 min.	70,000 (typ.), 40,000 min.	-
Turnover Temperature	T_M	$+25 \pm 5$		$^{\circ}C$
Parabolic Curvature Constant	-	-0.036 ± 0.006		PPM/ $^{\circ}C^{\circ}$
Shunt Capacitance	C_o	1.30 (typ.), 2.0 max.	1.10 (typ.), 1.8 max.	pF
Capacitance Ratio	-	530 (typ.), 650 max.	470 (typ.), 650 max.	-
Operating Temperature	T_{OPR}	$-10 \sim +60$		$^{\circ}C$
Storage Temperature	T_{STG}	$-20 \sim +70$		$^{\circ}C$
Shock Resistance	-	Drop test 3 times on hard wooden board fr. height 75cm/ ± 3 PPM max.		PPM
Insulation Resistance	IR	500 Mohm min./DC100V		Mohm

PACKAGE DIMENSIONS (mm)

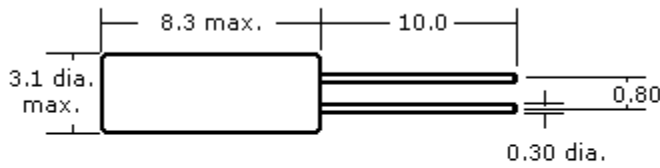


Figure 1) 3x8mm

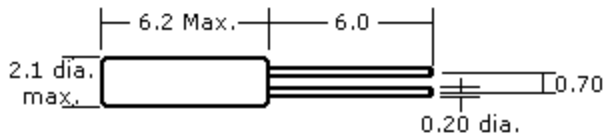
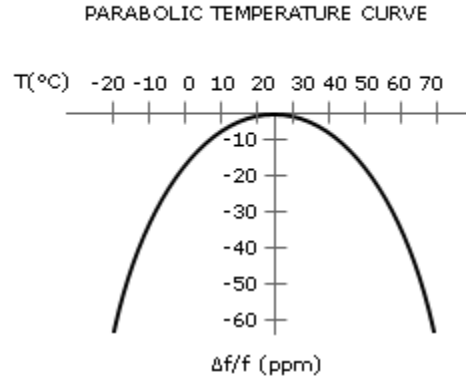


Figure 2) 2x6mm



To determine frequency stability, use parabolic curvature.
For example: What is the stability at 45°C?

- 1) Change in T(°C) = 45 - 25 = 20°C
- 2) Change in frequency = -0.04ppm × (ΔT)²
= -0.04ppm × (20)²
= -16.0ppm

PART NUMBER GUIDE

Series Number	Frequency	Load Capacitance	Tolerance @ +25°C	Operating Temp (°C)
122	- 40.0K	- 12.5	- 20	R
121 = 3x8 (Fig. 1) 122 = 2x6 (Fig. 2)	Enter your required frequency. e.g. 40.0K = 40.000 KHz	12.5 = 12.5pF SR = Series Resonance Others Avail.*	10 = ±10PPM 20 = ±20PPM Others Avail.	R = -10~+60 Others Avail.
<p>NOTE: Deviations on all parameters available. Please consult Oscilent for details. DEFINITIONS: Click on the characteristic names above, for definitions of that particular characteristic. *LOAD CAP.: 12.5pF standard. Other load capacitance available, please specify.</p>				

Oscilent Corporation - CALL **949.252.0522**

Series No.: 121 to 122

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