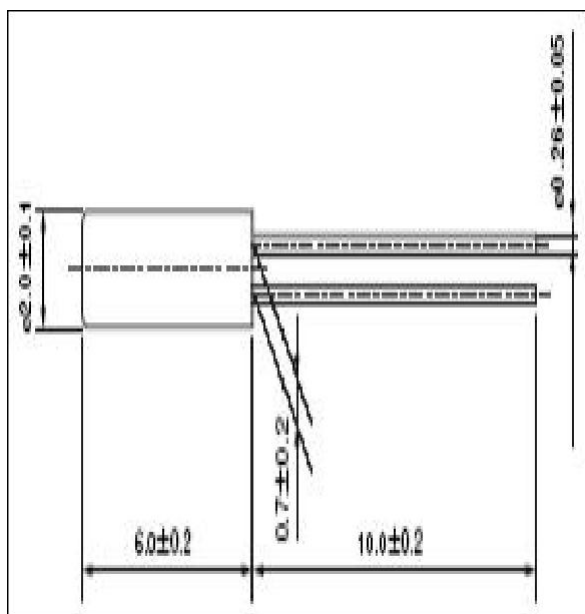


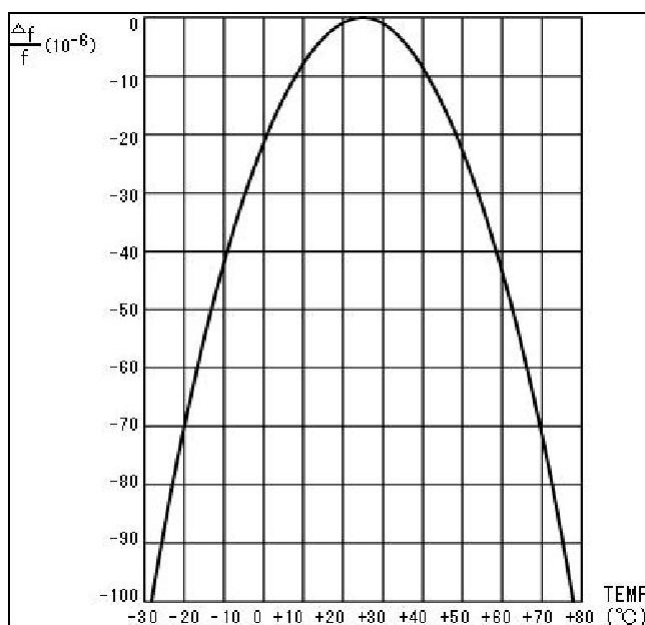
● ELECTRICAL PARAMETERS

谐振器产品技术指标		Min	Max	Units
1. Holder Type(型号规格)		SEAM 206		
3. Frequency (标称频率)		60.000000		KHz
4. Load Capacitance (CL) (负载电容)		12.5		pF
5. Drive Level (激励功率)		1.000		uw
6. Equivalent Resistance (谐振电阻)			35	KΩ
7. Shunt Capacitance (Co) (静态电容)		0	1.5	pF
8. Motional Capacitance (C1) (动态电容)		0.0028		fF
9. Frequency Tolerance at 25°C (调整频差)		-50	50	ppm
10. Temperature Coefficient 二次温度系数		[-0.035±0.01]ppm/°C		
11. Insulation Resistance (at DC 100V) (绝缘电阻)		500		MΩ
12. Operating Temperature Range (工作温度范围)		-20	70	°C
13. Storage Temperature Range (储存温度范围)		-40	85	°C
14. Aging (老化率)		± 5		ppm/year
15. DLD2	N/A		N/A	Ω
16. FLD2			N/A	ppm
17. RLD2			N/A	Ω
18. SPDB			N/A	db
19. Other(其它)		N/A		

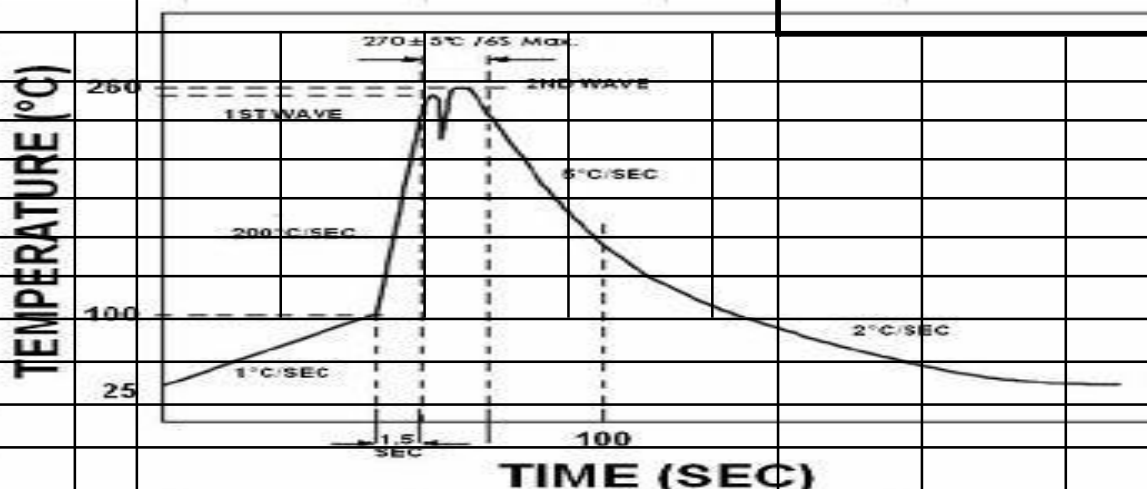
OUTLINE DIMENSIONS(UNIT:mm) 外形尺寸 (单位: mm)



FREQUENCY VS. TEMPERATURE CURVE



No.	Test Items	Test Method and Condition	Requirements
1	振動	(1)振動頻率Vibration Frequency 10 to 55Hz	頻率變化最大:±10ppm
	Vibration	(2)振動幅度Vibration Amplitude 1.5mm	Frequency Change:±10ppm Max.
		(3)周期 Cycle Time 1-2min(10-55-10Hz)	電阻變化最大:5kohm
		(4)振動方向Direction X.Y.Z	Resistance Change:5kohm Max.
		(5)振動時間Duration 2h/each direction	
2	衝擊	從75cm高的地方自由跌落3次到30mm厚的硬木板上	頻率變化最大:±10ppm
	Shock	3 Times free drop from 75cm height to hard wooden	Frequency Change:±10ppm Max.
		board of thickness more than 30mm	電阻變化最大:5kohm
			Resistance Change: 5kohm Max.
3	氣密性	晶體放入氦加壓罐內，充入氦氣壓力0.5-0.6Mpa保持1小時;	漏氣率小於:1x10 <sup>-8</sup> mbar.l/s
	Leakage	然後使用氦質譜檢漏儀測試。	Leakage:1x10 <sup>-8</sup> mbar.l/s Max.
		Put crystal units into a hermetic container and Helium for 0.5-0.6	
		Mpa,and keep it for 1h;Check the leakage by a Helium leak detector	
4	可焊性	將引線浸入完全熔化的焊錫鍋內3-5s，焊錫溫度245°C±5°C	浸過引線面積的95%以上被新焊錫
	Solderability	Put the leads of crystal units into solder melted tank for 3 to 5s	覆蓋The dipped surface of the leads
		Temperature of solder melted tank is 245°C±5°C	should be at least 95% covered with
5	手工焊接耐熱	350°C±10°C,3+1/-0 sec	頻率變化最大:±10ppm
	Soldering iron		Frequency Change:±10ppm Max.
	resistance		電阻變化最大:10kohm
			Resistance Change: 10kohm Max.
6	波峰焊耐熱	推荐使用下面的波峰焊溫度曲線進行波峰焊接。	
	Wave soldering	The WAVE SOLDERING PROFILE as below is recommended:	



No.	Test Items	Test Method and Condition	Requirements
7	引線強度(引線直插式晶體) Lead Strength(DIP)	用0.9kg(9N)的力持續拉晶體引線30s±5s; 用0.45kg的力折引線成90°2次(折彎處離機體1.5mm以上); The crystal lead with the 0.9kg(9N)power(keep it for 30s±5s) and bend the crystal lead 90° with 0.45kg power and two times (which you want to bend should be more than 1.5mm from the case)	引線無異常 The crystal lead is not abnormality
8	耐高溫能力 High Temperature Endurance	晶體放置於85°C±2°C環境中 2小時後, 常溫放置1-2小時 The crystal units shall be put in somewhere for 2 hours at temperature of 85°C±2°C, then keep it for 1 to 2 hours under room temperature	頻率變化最大:±10ppm Frequency Change:±10ppm Max. 電阻變化最大:5kohm Resistance Change:5kohm Max.
9	耐低溫能力 Low Temperature Endurance	晶體放置於-25°C 環境中2小時後, 常溫放置1-2小時 The crystal units shall be put in somewhere for 2 hours at temperature of -25°C, then keep it for 1 to 2 hours under room temperature	
10	耐濕性 Humidity Endurance	晶體放置於40°C、相對濕度90-95%環境中48小時後, 常溫放置1-2小時 The crystal units shall be put in somewhere at 40°C in relative humidity of 90-95% for 48 hours, then keep it for one or two hours under room temperature	
11	高低溫迴圈 Temperature Cycle	溫度從-40°C (保持30分鐘) 升高到100°C (保持30分鐘), 再降到-40°C (保持30分鐘) 然後回到室溫25°C完成一個迴圈, 共計5個迴圈 Temperature shift from low(-40°C) to high(100°C, keep 30 minutes), satisfy high(100°C) to low(-40°C, keep 30 minutes), then go up to room temperature for 5 cycles	