



**FEATURES**

- AT-cut crystal performance
- Wide frequency range
- Standard and moderate precision available
- Low profile package
- AEC-Q200 Qualified



Parameters		Specifications
Nominal Frequency Range 標稱頻率範圍	$f_0$	3.5MHz ~ 40.0MHz (Fundamental) 30.0MHz ~ 80.0MHz (3rd Overtone)
Frequency Tolerance, Ta=25°C ± 3°C 常溫頻率偏差	$\Delta f/f$	±10ppm, ±30ppm
Load Capacitance 負載電容	$C_L$	18pF or customer specify
Frequency Tolerance over Operating Temperature Range with refer to 25°C 相對於常溫的頻率溫度特性	$\Delta f/f$	±10ppm, ±30ppm
Operating Temperature Range 工作溫度範圍	$T_{OPR}$	-20°C ~ +70°C, -40°C ~ +85°C
Storage Temperature Range 儲存溫度範圍	$T_{STG}$	-55°C to 125°C
Drive Level 激勵功率	DL	0.1mW (1mW Max.)
Shunt Capacitance 靜態電容	$C_0$	7pF Max.
Insulation Resistance 絕緣電阻	IR	500MΩ Min.
Aging 老化率	$\Delta f_A$	±5ppm/Year Max.

SERIES RESISTANCE (ESR) 串聯諧振阻抗						
Frequency Range	3.5 < $f_0$ ≤ 4.5	4.5 < $f_0$ ≤ 6	6 < $f_0$ ≤ 8	8 < $f_0$ ≤ 12	12 < $f_0$ ≤ 15	15 < $f_0$ ≤ 18
ESR	120Ω Max.	90Ω Max.	70Ω Max.	60Ω Max.	40Ω Max.	30Ω Max.

Frequency Range	18 < $f_0$ ≤ 40	30 < $f_0$ ≤ 35 (3.O.T)	35 < $f_0$ ≤ 40 (3.O.T)	40 < $f_0$ ≤ 80 (3.O.T)
ESR	25Ω Max.	100Ω Max.	80Ω Max.	70Ω Max.

Please consult our sales representatives for other specifications.  
如對其他規格查詢，請與我司銷售人員聯繫

**DIMENSION (mm)**

Series	Height (H)
THHF-49S3	3.5mm Max.
THHF-49S2A	2.5mm Max.
THHF-49S2B	2.3mm Max.

**THHF-49S3/THHF-49S2A/THHF-49S2B**

All specifications are subject to change without prior notice.  
本公司保留修改規格的權利。

