

# HC49US-SMX Series



## Crystal unit

RoHS & REACH compliant  
Metal can SMD quartz crystal unit  
wide frequency range  
Lower package height options available



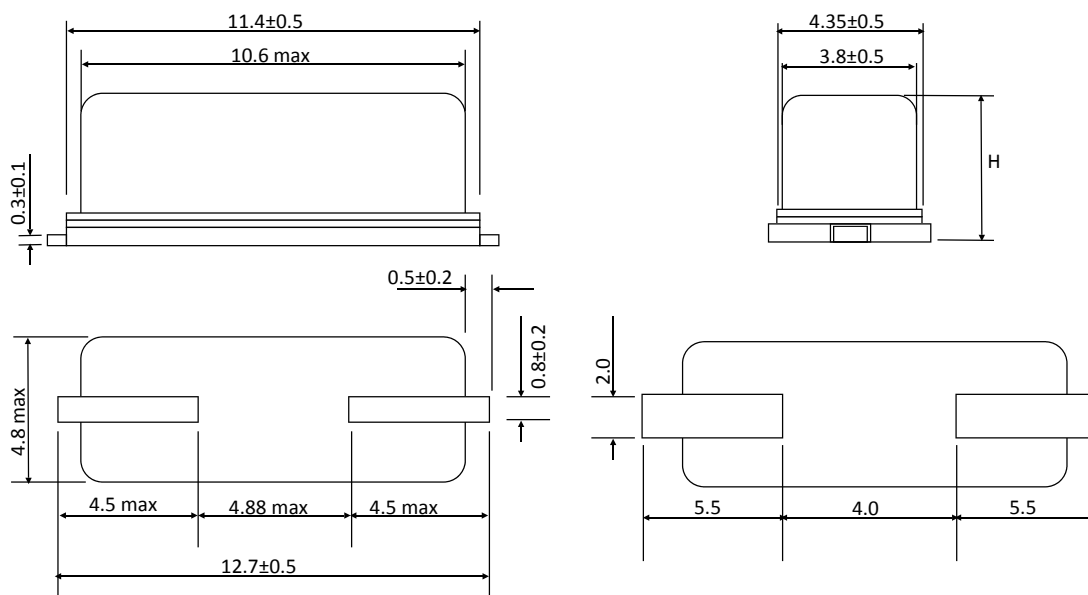
Parameters		Specification	Remarks
Frequency Range	F_nom	3.0MHz ~ 100.0MHz	Table 1
Frequency Tolerance	F_tol	±5.0ppm ~ ±100.0ppm	
Frequency stability over operating temperature range	F_stb	±5.0ppm ~ ±50.0ppm	Table 2
Operating Temperature Range	T_use	-10°C ~ +60°C, -20°C ~ +70°C, -40°C ~ +85°C	Table 2
Storage temperature	T_stg	-55°C ~ +125°C	
Load capacitance	CL	5.0pF ~ 32.0pF, Series	
Equivalent Series Resistance	ESR	Table 1	
Shunt capacitance	CO	7.0pF max	
Drive level	DL	500µW max	100µW typical
Frequency Aging	F_age	±3.0ppm/year at 25°C	
Moisture sensitivity level	MSL	1 (unlimited)	
Electrostatic discharge	ESD	Not applicable	
Insulation resistance	IR	500MΩ min	At 100V DC

Frequency Range	ESR
3.0MHz ~ 3.500MHz	150Ω
3.579545MHz ~ 5.999MHz	150Ω
6.000MHz ~ 7.999MHz	60Ω
8.000MHz ~ 15.999MHz	50Ω
16.000MHz ~ 30.000MHz	40Ω

Frequency Range	ESR
24MHz ~ 29.999MHz	100Ω
30.000MHz ~ 49.999MHz	80Ω
50.000MHz ~ 100.000MHz	60Ω

Temp. (°C)	Stability in ppm				
	±10	±15	±20	±30	±50
-20°C ~ 70°C	√	√	√	√	√
-30°C ~ 85°C	√	√	√	√	√
-40°C ~ 85°C	Enquire	√	√	√	√

## Dimensions (mm)



Height (H)	Part code
4.2mm	PO
3.2mm	AT
3.0mm	BX
2.7mm	BK

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ISO9001 Registered

Specifications subject to change without notification

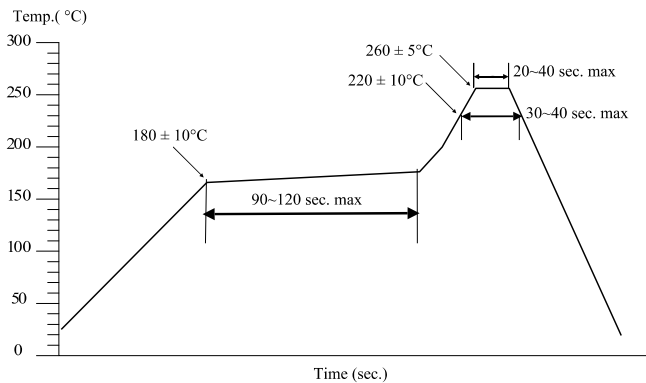
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Part number generation								
PO	2700	G	K	L	GO	F	L	-PF
ACT Series Code (H = height)	Frequency (MHz)	Frequency Tolerance ( $\pm$ ppm)	Frequency stability over temperature range ( $\pm$ ppm)	Operating Temperature Range ( $^{\circ}$ C)	Load capacitance (CL -pF)	Frequency Mode	Packaging (Tape & Reel)	RoHS
H=4.2mm=PO H=3.2mm=AT H=3.0mm=BX H=2.7mm=BK	27MHz = 2700 8MHz = 0800  Note: Use the first 4 characters of the frequency in Hz i.e. 27MHz =27000000Hz  If the frequency is 100MHz or higher then the first 5 characters are used	$\pm$ 10 = E $\pm$ 15 = F $\pm$ 20 = G $\pm$ 25 = H $\pm$ 30 = I $\pm$ 50 = L	$\pm$ 10 = F $\pm$ 15 = G $\pm$ 20 = I $\pm$ 25 = J $\pm$ 30 = K $\pm$ 50 = O	-10~+60 = E -20~+70 = G -30~+85 = L -40~+85 = M	8 = GO 9 = JO 10 = KO 11 = MO 12 = OO 13 = YO 14 = ZO 15 = PO 16 = RO 18 = TO 20 = VO 22 = WO 30 = DA SR = SR	Fundamental = F  3 <sup>rd</sup> OT = A	Loose = L 3000pcs = D	RoHS = -pF
Note: It is important to suffix the above part number with full frequency required to give a completed part number as illustrated below. Full Example Part Number : <b>PO0800GKLGOF-L-PF [8MHz]</b> , <b>PO2700GKLGOF-L-PF [27.000MHz]</b> , <b>PO2457GKLGOF-L-PF [24.576MHz]</b>								

### Solder Reflow Profile



### Additional information

Drawing control: (Internal use only)  
 Commodity code: 854160 00 00  
 Issue number: 1  
 Date: 1/2/2017  
 Internal reference: SCB