

# 750 SMX-4 Series

## 7.0 x 5.0mm Crystal unit



RoHS & REACH compliant  
Wide frequency range  
Excellent stability range



Parameters		Specification	Remarks
Frequency range	F_nom	6.0MHz ~ 50.0MHz	
Frequency tolerance	F_tol	±10.0ppm ~ ±50.0ppm	
Frequency stability over operating temperature range	F_stb	±10.0ppm ~ ±100.0ppm	Table 2
Operating temperature range	T_use	0°C ~ +60°C to -40°C ~ +105°C	Table 2
Storage temperature	T_stg	-40°C ~ +85°C	
Load capacitance	CL	8.0pF ~ 30.0pF, series	
Equivalent series resistance	ESR	Table 1	
Shunt capacitance	C0	7.0pF max	
Drive level	DL	200µW max	
Frequency aging	F_age	±3.0ppm / year max	
Moisture sensitivity level	MSL	1 (unlimited)	
Electrostatic discharge	ESD	Not applicable	
Insulation resistance	IR	500MΩ min	At 100V DC

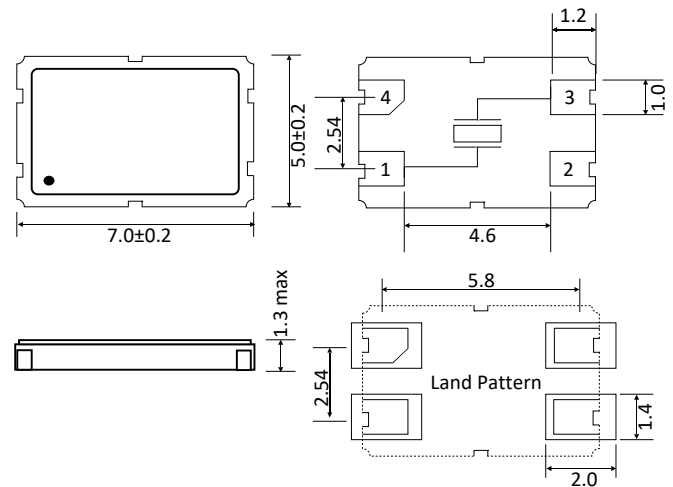
Table 1. Frequency range (MHz) vs ESR

6.0MHz ~ 6.999MHz (Fundamental)	120Ω
7.0MHz ~ 9.999MHz (Fundamental)	70Ω
10.0MHz ~ 11.999MHz (Fundamental)	60Ω
12.0MHz ~ 14.999MHz (Fundamental)	60Ω
15.0MHz ~ 19.999MHz (Fundamental)	50Ω
20.0MHz ~ 34.999MHz (Fundamental)	40Ω
35.0MHz ~ 43.999MHz (3 <sup>rd</sup> overtone)	80Ω
44.0MHz ~ 49.999MHz (3 <sup>rd</sup> overtone)	60Ω
50.0MHz ~ 79.999MHz (3 <sup>rd</sup> overtone)	60Ω
80.0MHz ~ 125.000MHz (3 <sup>rd</sup> overtone)	60Ω

Table 2. Frequency Stability vs Temperature

Temp. (°C)	Frequency Stability (ppm)					
	±10	±15	±20	±30	±50	±100
-10°C ~ 60°C	√	√	√	√	√	√
-10°C ~ 70°C	√	√	√	√	√	√
-20°C ~ 70°C	√	√	√	√	√	√
-30°C ~ 70°C		√	√	√	√	√
-20°C ~ 85°C		√	√	√	√	√
-30°C ~ 85°C			√	√	√	√
-40°C ~ 85°C			√	√	√	√
-40°C ~ 105°C				√	√	√

Dimensions (mm)



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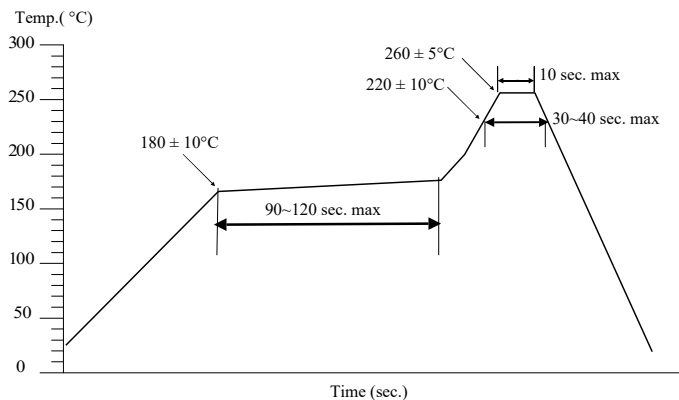
7.0 x 5.0mm Crystal unit



Part number generation								
CF	2700	G	K	L	GO	F	L	-PF
ACT Series Code	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
CF	8MHz = 0800 27MHz = 2700  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	$\pm 10 = E$ $\pm 15 = F$ $\pm 20 = G$ $\pm 25 = H$ $\pm 30 = I$ $\pm 50 = L$ $\pm 100 = N$	$\pm 10 = F$ $\pm 15 = G$ $\pm 20 = I$ $\pm 30 = K$ $\pm 50 = O$ $\pm 100 = V$	0 ~ +60 = B -10 ~ +60 = E -10 ~ +70 = F -20 ~ +70 = G -30 ~ +65 = W -30 ~ +70 = T -20 ~ +85 = H -30 ~ +85 = L -40 ~ +85 = M -40 ~ +105 = Y	8 = GO 9 = JO 10 = KO 12 = OO 13 = YO 14 = ZO 16 = RO 18 = TO 20 = VO 22 = WO 30 = DA Series = SR	Fundamental = F  3 <sup>rd</sup> Overtone = A	Loose = L 1000pcs = C	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 : CF0800GKLGOF-L-PF [8.000MHz], CF2700GKLGOF-L-PF [27.000MHz] , CF2457GKLGOF-L-PF [24.576MHz]

## Solder Reflow Profile



## Additional information

Drawing control: (Internal use only)  
 Commodity code: 854160 00 00  
 Issue number: N1  
 Date: 1/06/2019  
 Internal reference: C1F

**ACT (A wholly owned Acal BFi Company)**  
**+44 (0) 118 978 8878 | sales@act.co.uk | www.act.co.uk**

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Specifications subject to change without notification