(Former HC49SSLF)

### 11.35mm x 4.65mm

# **Thru-Hole Crystal**



#### **Features**

- Tolerances down to ±10 PPM
- Stabilities down to ±5 PPM
- Operating Temperature Range to -55°C ~ +125°C

STANDARD SPECIFICATIONS					
PARAMETERS	MAX (Unless otherwise noted)				
Frequency Range	3.200 ~ 80.000 MHz				
Frequency Tolerance @ 25°C	(See options below)				
Frequency Stability, ref 25°C	(See options below)				
Temperature Range					
Operating (T <sub>OPR</sub> )	(See options below)				
Storage (T <sub>STG</sub> )	-40°C ~ +125°C				
Shunt Capacitance (C <sub>0</sub> )	7 pF				
Load Capacitance (C <sub>L</sub> )	(See options below)				
Drive Level	0.5 mW (100μW Typical)				
Aging per year (@ 25°C)	±3 PPM				
Maximum Soldering Temp / Time	260°C / 10 Seconds				
Moisture Sensitivity Level (MSL) per	1				
J-STD-033					
Termination Finish	Sn96.5/Ag3.0/Cu0.5				
Seal Method	Resistance Weld				
Lead (Pb) Free	Yes				
RoHS Compliant	Yes				

Frequency Range (MHz)	<b>Operating Mode</b>	Max ESR $\Omega$	
4.000 ~ 5.000	Fundamental	150	
5.000001 ~ 6.000	Fundamental	120	
6.000001 ~ 7.000	6.000001 ~ 7.000 Fundamental		
7.000001 ~ 9.000	Fundamental	80	
9.000001 ~ 13.000	Fundamental	60	
13.000001 ~ 20.000	Fundamental	40	
20.000001 ~ 40.000	Fundamental	30	
24.000 ~ 70.000	3 <sup>rd</sup> OT	100	
70.000001 ~ 80.000	3 <sup>rd</sup> OT	70	

DIMENSIONS / MECHANICAL SPECIFICATIONS					
3.7					
11.35 Max ———————————————————————————————————					
0.43 — 12.7 Min					
4.88±0.2					

Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary. All specifications subject to change without notice. All dimensions are in mm.



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AVAILABLE OPERATING TEMPERATURES AND STABILITIES*								
Operating Temperature	±5 PPM	±10 PPM	±15 PPM	±20 PPM	±25 PPM	±30 PPM	±50 PPM	±100 PPM
-10°C to +60°C	0	0	0	0	0	0	0	0
-20°C to +70°C	Δ	0	0	0	0	0	0	0
-40°C to +85°C	Х	Х	0	0	0	0	0	0
-40°C to +105°C	Х	Х	Х	Х	Х	Δ	0	0
-40°C to +125°C	Х	Х	Х	Х	Х	Х	Δ	0
-55°C to +125°C	Х	Х	Х	Х	Х	Х	Δ	0
Key: O = Available, X = Not Available, $\Delta$ = Consult Fox Technical Support, *Does not imply a stocked part.								

Available Options & Part Identification for Thru-Hole Crystal FC9ST <sup>1</sup>									
Sample PN: FC9STCBMF16.0									
F	C9ST	С	C B M F 16.0		16.0				
<u>Fox</u>	Model	<u>Tolerance</u>	<b>Stability</b>	<u>Load</u>	Operating	Frequency	Values Added Options		
	Number	B = ±50 PPM	A = ±100 PPM	Capacitance <sup>2</sup>	<b>Temperature</b>	<u>(MHz)</u>	Blank = Bulk		
		C =±30 PPM	B = ±50 PPM	A = Series	$D = -10 \text{ to } +60^{\circ}\text{C}$				
		$D = \pm 25 PPM$	C = ±30 PPM	E = 10pF	F = -20 to +70°C				

 $M = -40 \text{ to } +85^{\circ}\text{C}$ 

 $P = -40 \text{ to } +105^{\circ}\text{C}$ 

I = -40 to +125°C

L = -55 to +125°C

G = 12pF

K = 16pF

L = 18pF

M = 20pF

 $E = \pm 20 \text{ PPM} \mid D = \pm 25 \text{ PPM}$ 

 $F = \pm 15 PPM \mid E = \pm 20 PPM$ 

 $H = \pm 10 \text{ PPM}$   $F = \pm 15 \text{ PPM}$ 

 $H = \pm 10 PPM$ 

 $L = \pm 5 PPM$ 

**Reliability Test Conditions** 

Please contact Abracon Quality Assurance department

<sup>1</sup> Not all frequency, tolerance, stability, load, and operating temperature combinations may be available.

<sup>2</sup> Listed load capacitances represent the most commonly used. Other load capacitances are available. Contact us for assistance