

Features:

- Frequency Range: 5 to 50 MHz
- Micro Package Size
- Low Cost Options Available
- Able to Withstand 240°C Reflow
- Electronic Frequency Adjust Standard

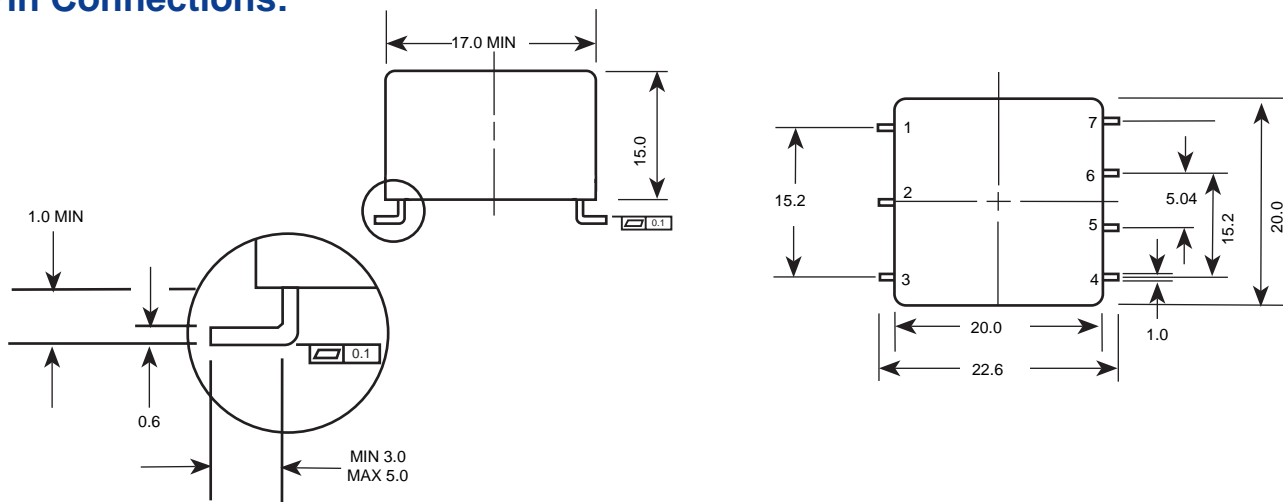


The Model 109 is a micro size OCXO with big performance. Less than .5 cubic inches, it is capable of covering a wide range of performance through the use of precision AT crystals and newer SC cut crystals. The 109 series is able to meet the requirements of GSM systems, Private Branch Exchange (PBX), SONET and SDH applications. Its size and performance also make it ideal for Microwave and Synthesizer applications that require more economy while maintaining a high level of performance.

Electrical Specifications:

<i>Parameter</i>	<i>Frequency Range (MHz)</i>
	5 to 50 MHz
Supply Voltage (Vdd) Maximum Operating	12 Vdc \pm 5% (+5 Vdc Optional)
Supply Current (@ 25°C) Warm-up Steady State	350 ma. Max. 120 ma. Typ.
Output Type	HCMOS Compatible (Sinewave Optional)
Logic 1 - Voh	4.5V Min.
Logic 0 - Vol	.5V Min.
Warm-up (@ 25°C) Ref. to Freq. at 1 hr.	$\pm 1 \times 10^{-7}$ / 5 Min. $\pm 1 \times 10^{-8}$ / 30 Min.
Phase Noise (1 Hz Bandwidth) (Typical @ 10 MHz)	Offset Level (dBc)
	10 Hz -100
	100 Hz -120
	1 kHz -140
10 kHz -155	
Electrical freq. adjust (negative slope)	Sufficient for 10 years Aging (Range is Option Dependent) 0 to 5 Vdc

Outline Drawing and Pin Connections:



Mechanical Specifications:

Case:

CRS, Hot Tin Dipped
FR-4 Base

Leads:

Nickel plated with solder coating

Seal:

Solder seal

Leak Test:

Leak rate less than 5×10^{-5}
atmosphere-cc/sec of helium

Solderability:

95% solder coverage, using RMA flux 63
SN / 37 Pb solder at $+245^{\circ}\text{C} \pm 5^{\circ}\text{C}$

Temperature:

Operating: See chart
Storage: -55° to 85°C
Reflow: 240°C , 10 Sec

Vibration:

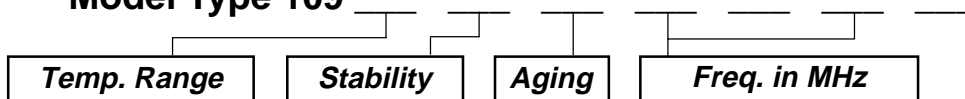
10 G's rms, 20 to 500 Hz

Mechanical Shock:

100 G's 5ms pulse (3 shock/plane)

Ordering Information:

Model Type 109



Temp Stability		$\pm 5 \times 10^{-9}$	$\pm 1 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-7}$	1 st Year Aging	Code
Temp Range	Code	A	B	C	D	E		
0° to 50°C	A	X	X	X	X	X	± 0.5 ppm	A
0° to 70°C	B		X	X	X	X	± 0.3 ppm	B
-30° to 70°C	C				X	X	± 0.1 ppm	C
-40° to $+85^{\circ}\text{C}$	D					X	± 0.05 ppm	D

Note: Not all Options are Available at all Frequencies. Consult Factory for Details.