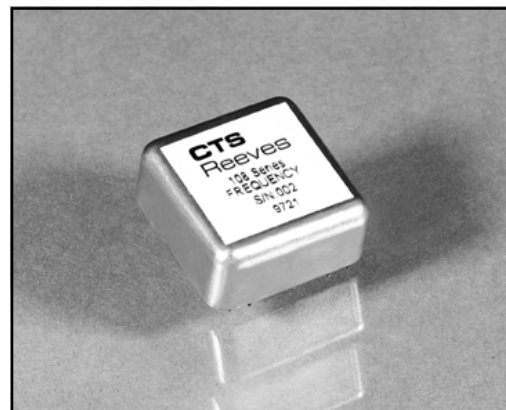


Features:

- Frequency Range: 5 to 50 MHz
Surface Mount or Thru Hole Options
- Miniature Package Size
- Low Cost Options Available
- Able to Withstand 240°C Reflow Soldering
- Electronic Frequency Adjust Standard
- Wide Range of Performance Options

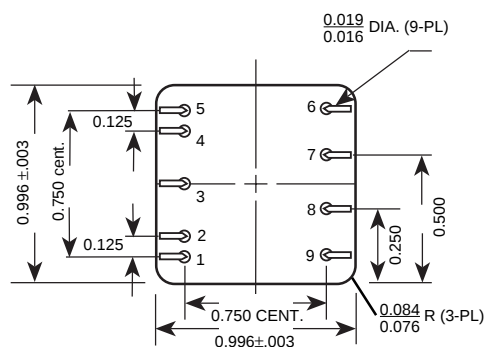


Weighing in at less than 15 grams and less than two thirds of a cubic inch, the Model 108 is capable of covering a wide range of performance through the use of precision AT crystals and newer SC cut crystals. The 108 series is able to meet the requirements of GSM systems, Private Branch Exchange (PBX) and Central Office Switch (COS) 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.

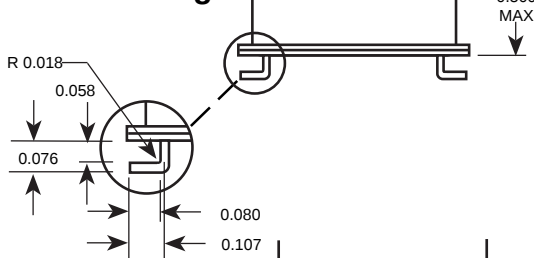
Electrical Specifications:

Parameter	Frequency Range (MHz)		
	5 to 50 MHz		
Supply Voltage (Vdd) Operating	12 Vdc $\pm 5\%$ (+5 Vdc Optional)		
Supply Current (@ 25°C) Warm-up Steady State	350 ma. Max. 120 ma. Typ.		
Output H S	HCMOS Compatible Sinewave 0 dBm Min.		
Load H / S	15 pf / 50 Ω		
Harmonics S	-25 dBc Max.		
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)	Standard Low Noise
	10 Hz	-100	-115
	100 Hz	-120	-135
	1 kHz	-140	-150
	10 kHz	-150	-155
Electrical freq. adjust (negative slope)	Sufficient for 10 years Aging (Range is Option Dependent) 0 to 5 Vdc		

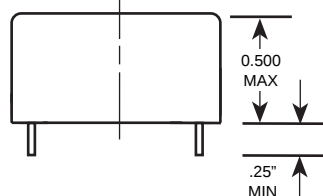
Outline Drawing and Pin Connections:



SMT Package



Thru Hole



Pin Connections

PIN	FUNCTION
1	RF OUT
2	N/C
3	GND/CASE
4	N/C
5	EFC
6	REF VOLT OUT
7	N/C
8	N/C
9	5V SUPPLY

Mechanical Specifications:

Case:

CRS, Hot Tin Dipped

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 108

Temp. Range	Stability	Aging	Phase Noise	Output Type	Pkg. Type	Frequency
Temp Stability	$\pm 5 \times 10^{-9}$	$\pm 1 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-7}$	1st Year Aging Code
Temp Range Code	A	B	C	D	E	Code
0° to 50°C A	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	X	±0.1 ppm C
-40° to +85°C D			X	X	X	±0.05 ppm D
						Phase Noise Code
						Std A
						Low Noise B
						Output Code
						HCMOS H
						Sinewave S
						Pkg. Type
						T Thru Hole
						S SMT

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