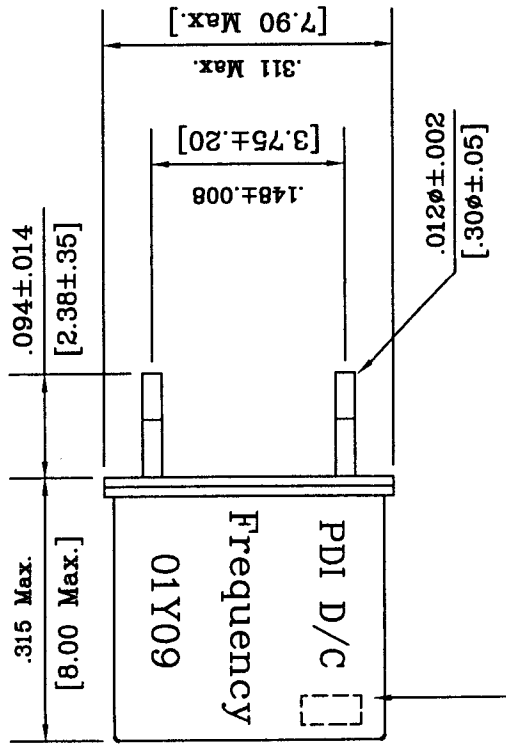
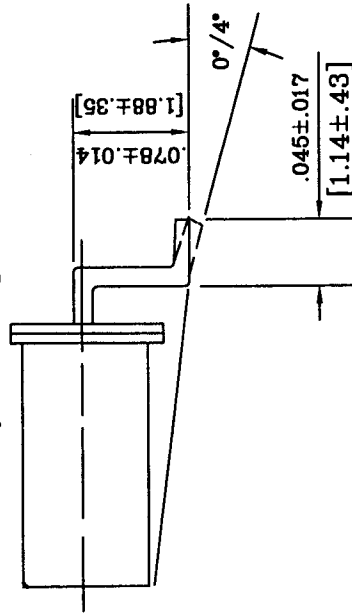


DATE SYM	REVISION RECORD	AUTH.	DR.	CK.
8/02 A	Added Date Code to PDI P/N		D.A.	1113
10/02 B	Changed Combined Temperature Tolerance		D.A.	B0068



Traceability Marking Code



Leads shall be coplanar within  $\pm .003 \text{ in.}$  is greater.

**ELECTRICAL SPECIFICATIONS:**

- Center Frequency (Fo): 19.194400 Mhz
- Oscillation Mode: Fundamental
- Series Resistance (RS): 25 Ohms Max.
- Calibration Tolerance @25°C:  $\pm 10.0 \text{ ppm}$   
Max. Change over Temperature Range:  $\pm 10.0 \text{ ppm}$
- Operating Temperature Range:  $-30^\circ\text{C}$  to  $+60^\circ\text{C}$
- Storage Temperature Range:  $-40^\circ\text{C}$  to  $85^\circ\text{C}$
- Drive Level: 50.0uW Min/250.0uW Max.
- Co (Shunt Capacitance): 2.5pf/4.5pf
- C1 (Motional Capacitance): 14.0fF  $\pm 1.0 \text{ fF}$
- Load Capacitance: 20.0pf  $\pm 0.1 \text{ pf}$
- Aging:  $\pm 5.0 \text{ ppm/Over 10 years}$
- Seal Method: Resistance Weld
- 3rd overtone (3x nominal Frequency):  
3rd overtone response cannot fall between 57.583200Mhz  $\pm 200.0 \text{ ppm}$
- Insulation Resistance: 500 Megohms Min.
- Crystal: AT Cut
- Trim Sensitivity (TS): 11.5 Min. ppm/pf  
14.5 Max., ppm/pf

Crystal Unwanted Modes: Crystal units shall have a minimum unwanted mode effective resistance of 60 Ohms or an unwanted to main mode resistance ratio of 2 to 1, whichever is greater.

PRECISION DEVICES INC.	
TOLERANCES (EXCEPT AS NOTED)	SCALE
DECIMAL +/-	N.T.S.
FRACTIONAL +/-	Tolerance: Decimal: $\pm .004$ Metric: $\pm [ .10 ]$
ANGULAR +/-	TITLE
	Final Assembly
DATE 10/24/02	DRAWING NUMBER U119194XFSM20GX
	(FKA 11922G)
	DRAWN BY D. Hilkey APPROVED BY D.W.