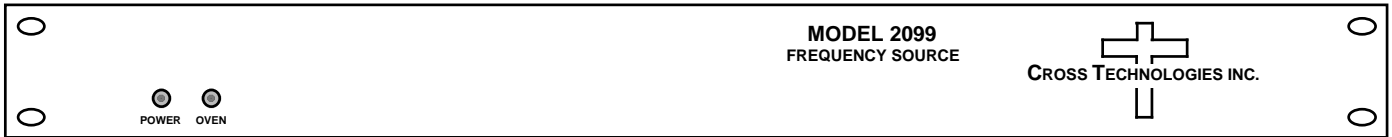




**2099-100 100MHz Reference**

The 2099-100 100 MHz Reference provides two 100 MHz outputs from a  $\pm 0.1$  ppm high stability oven controlled crystal oscillator. Front panel LEDs provide indication of DC power and oven warm-up. The level is +9 dBm and the 2099-100 works into either a 75 or 50 ohm load. Connectors are BNC female. A relay contact closure or open indicates when the oscillator oven is stabilized. The unit is powered by a **100-240  $\pm 10\%$  VAC** power supply; and housed in a 1 3/4" X 19" X 14" rack mount chassis.



**Front Panel**

**EQUIPMENT SPECIFICATIONS\***

**Output Characteristics**

- Number of outputs 2
- Impedance 50 $\Omega$  or 75 $\Omega$
- Return Loss >18 dB
- Frequency 100.0000 MHz
- Output Level +9  $\pm$  1 dBm
- Harmonics < -30 dBC, < -40 typ.
- Spurious < -75 dBC

**Oscillator Stability**

- Over temperature  $\pm 0.1$  ppm max 0 $^{\circ}$ C to +50 $^{\circ}$ C
- Aging, per day  $\pm 0.01$  ppm
- Aging, per year  $\pm 0.5$  ppm
- Warm up, in 4 minutes  $\pm 1.0$  ppm
- Warm up, in 1 hour  $\pm 0.1$  ppm
- Mechanical adjustment  $\pm 1$  ppm

**Oscillator Phase Noise**

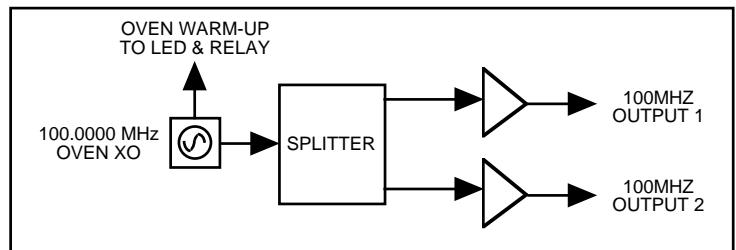
Phase Noise @ Freq	10Hz	100Hz	1kHz	10 kHz
dBC/Hz	-90	-125	-145	-155

**Controls, Indicators**

- Power Green LED
- Oven Warm Up Yellow LED, External contact closure

**Other**

- 100 MHz Connectors BNC (female)
- Connector, Alarm DB9 - NO or NC contact closure on Alarm
- Size 19 inch standard chassis 1.75" high X 14.0" deep
- Power 100-240  $\pm 10\%$  VAC, 47 - 63 Hz, 20 watts max.



**Block Diagram**

\*10 $^{\circ}$ C to 40 $^{\circ}$ C; Specifications subject to change without notice

