



2099-100 100MHz Reference

The 2099-100 100 MHz Reference provides two 100 MHz outputs from a ± 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

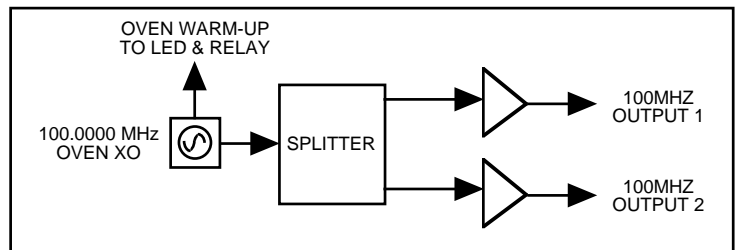
Number of outputs	2
Impedance	50 Ω or 75 Ω
Return Loss	>18 dB
Frequency	100.0000 MHz
Output Level	+9 \pm 1 dBm
Harmonics	< -30 dBC, < -40 typ.
Spurious	< -75 dBC

Oscillator Stability

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

Oscillator Phase Noise

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



Block Diagram

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.

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