Technical Specification

MODEL VXI-8110
REFERENCE FREQUENCY SOURCE

FEATURES

The VXI-8110 is a VXI C-size slot module, providing multiple outputs at 10 MHz with high stability and spectral purity. It consists of a high stability oven crystal oscillator, a spectral clean-up crystal filter to minimize phase noise, and a distribution amplifier with 12 sinusoidal outputs and two TTL outputs to the front panel. For still higher stability, an external oscillator such as cesium beam or rubidium may be used, and the unit will still provide spectral cleanup and the distribution amplifier. The unit draws power from the VXI chassis, but has no VXI bus interface.

The sinusoidal outputs are ideal for driving the reference inputs of Cubic's VXI receivers. The TTL outputs may be used to supply the External Clock of certain Slot 0 controllers which require TTL levels. A front panel "Failed" LED illuminates if the output drops below a preset level.

VXI-8110 REFERENCE FREQUENCY SOURCE SPECIFICATION

FREQUENCY

10.0 MHz

STABILITY

$\pm 1 \times 10^{-7}$ from 0° to 60°C
(Optional $\pm 1 \times 10^{-8}$/0° to 70°C)

AGING

Less than 1×10^{-7} per month after 60 days

FREQUENCY ADJUSTMENT RANGE

±50 Hz minimum

POWER REQUIREMENTS:

+24V at 350 mA maximum at initial power up (dropping to approximately 200 mA after warm up at 25°C), +5V at 50 mA

OUTPUT LEVEL

SINE: +3 dBm nominal (0 dBm min) into 50 ohms

TTL: Low 0.8V at 10 mA sink
High 3.5V at 10 mA source

SHORT CIRCUIT PROTECTION

Continuous (all outputs)

EXTERNAL REFERENCE INPUT LEVEL

0 dBm nominal (operable from -5 dBm to +27 dBm or 0.5V to 10V peak-to-peak squarewave)

EXTERNAL REFERENCE INPUT IMPEDANCE

50 ohm ±20%, AC coupled

PHASE NOISE

Less than -125 dBc at 100 Hz
Less than -150 dBc at offsets greater than 1 kHz

HARMONICS (SINE)

Less than -40 dBc

CONNECTORS

Output: SMB
Input: SMA

WARM-UP TIME

Less than 30 minutes to within 1×10^{-7}

ADDITIONAL INFORMATION

1. Ext. Ref input selected automatically if signal is present
2. FAILED LED lights if sine output level drops below -4 dBm
3. Daisy-chained VXI bus signals are passed through so that the module may be used in Slot 1 to Slot 12 of any VXIbus chassis

Ordering Information

Model	Part Number	Description
VXI-8110	2806-1000-1	Reference Frequency Source (1×10^{-7})
VXI-8110-1	2806-1000-2	Reference Frequency Source (1×10^{-8}) oven-controlled

Specifications subject to change without prior notice

Printed in U.S.A. Copyright 10/10

CUBIC DEFENSE APPLICATIONS, INC.
A member of the Cubic Corporation family of companies
An ISO 9001:2000 Certified Company

9333 Balboa Ave., San Diego, CA 92123
PHONE: 858.505.2024 FAX: 858.505.1593
www.cubic.com