



# STEP RECOVERY DIODE COMB (HARMONIC) GENERATORS

0.1 – 26 GHz

## FEATURES

- Broadband Output Frequency Spectrum (from second harmonic to 26 GHz)
- No Bias Required
- Input Matched to 50 Ohms
- Hermetically Sealed Module
- Available in Drop-In Type Package



## APPLICATIONS

- Impulse Generator
- Frequency Multipliers
- Frequency Synthesizers
- Built-In-Self-Test Sources

## ENVIRONMENTAL RATINGS

Max Input Power..... 1 Watt  
Operating Temperature..... -55°C to +95°C  
Storage Temperature..... -65°C to +150°C  
Temperature Cycling..... -65°C to +150°C  
Shock..... 1500 G, 0.5 msec; 50 G, 11 msec  
Vibration..... 20 G, 100 to 2,000 Hz  
Acceleration..... 10,000 G

## Specifications: (@ +25°C, 0.5 Watt Input)

| MODEL <sup>1</sup> | INPUT <sup>2</sup><br>FREQ.<br>(MHz) | MAX<br>INPUT<br>VSWR | MINIMUM OUTPUT POWER PER PICKET (dBm) |         |            |             |           | OUTLINE |
|--------------------|--------------------------------------|----------------------|---------------------------------------|---------|------------|-------------|-----------|---------|
|                    |                                      |                      | UP to 4 GHz <sup>3</sup>              | 4-8 GHz | 8-12.4 GHz | 12.4-18 GHz | 18-26 GHz |         |
| GC100**            | 100                                  | 2:1                  | -10                                   | -20     | -30        | -40         | ----      | C,L,Y   |
| GC200**            | 200                                  | 2:1                  | -5                                    | -15     | -25        | -35         | ----      | C,L,Y   |
| GC250**            | 250                                  | 2:1                  | 0                                     | -10     | -20        | -30         | ----      | C,L,Y   |
| GC500**            | 500                                  | 2:1                  | +5                                    | -5      | -15        | -20         | ----      | C,L,Y   |
| GC1000**           | 1000                                 | 2:1                  | +5                                    | 0       | -10        | -15         | ----      | C,L,Y   |
| GC0526**           | 500                                  | 2:1                  | +5                                    | -5      | -15        | -20         | -40       | C,L,Y   |
| GC1026**           | 1000                                 | 2:1                  | +5                                    | 0       | -10        | -15         | -35       | C,L,Y   |
| GC1526**           | 1500                                 | 2:1                  | +5                                    | 0       | -5         | -10         | -25       | C,L,Y   |
| GC2026**           | 2000                                 | 2:1                  | +5                                    | +5      | 0          | -10         | -20       | C,L,Y   |

Note 1: Suffix (\*\*) specify options for internal DC return and packaged style. First Position: N indicates no DC and R indicates internal DC return included. Second Position: C, L, or Y indicates Package style (see outline drawings page)

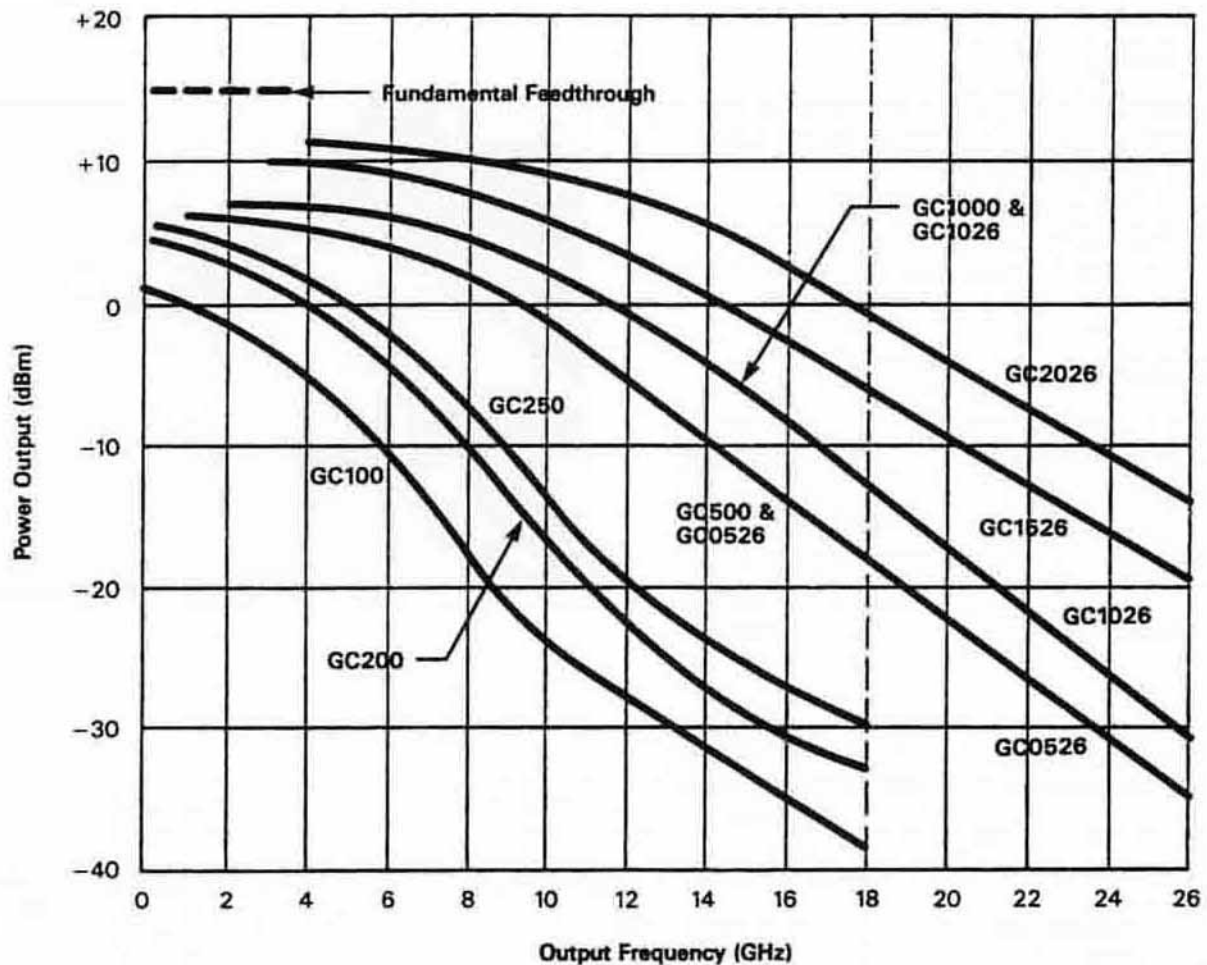
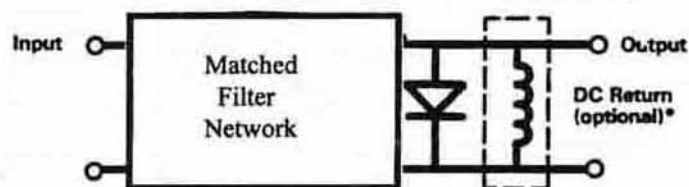
Note 2: Other input frequencies from 30 MHz to 2 GHz are available. Contact factory for information.

Note 3: For second harmonics up to 4 GHz the fundamental feedthrough is typically +15dBm.

Note 4: All units can respond to a 3% bandwidth of input frequency without significant degradation.

Note 5: All models can be modified for use as an impulse generator. Consult factory for information on output amplitude, polarity, and pulse width.

Note 6: Add "X" to final suffix for an enhanced assembly version for more severe vibration environment.

**TYPICAL OUTPUT POWER SPECTRUM ENVELOPE****SCHEMATIC**

\*DC return is required for proper operation. It can be provided internally or externally.

For Package Outlines see Outline Drawings Page