API Technologies’ Series 95 Comb Generators use a Step Recovery Diode (SRD) to generate very narrow voltage spikes; these in turn produce an output frequency spectrum rich in harmonics. The spacing between the signals is equal to the source that drives the SRD, which in most cases is a stable crystal oscillator. Examples of the spectrum for a number of comb generators are included on the reverse side of this fact sheet. The crystal oscillator is normally internal; however, an external signal can be used to drive the SRD.

If only certain combline signals are required for a particular application, a filter tuned to the desired combline must be used.

Comb Generators have several applications. They are commonly used as Built-in-Test (BIT) oscillators to calibrate receivers; other uses are in Phase Locked Loops (PLL), Jammers, Antenna Testing, Linearizing Voltage Controlled Oscillators, etc.
Comb Generators

SERIES 95 SPECIFICATIONS

Comb Spacing ...................................................... 1 to 1000 MHz
Output Spectrum .................................................. See plots (Typical)
Frequency Stability .............................................. +1 to +30 ppm
Temperature ...................................................... (0 to +50 ºC) to (-55 to +85 ºC)
Input Voltage ....................................................... +15 VDC
Connectors ......................................................... RF-SMA Jack
DC Input ............................................................. Solder Type Filter Capacitors

SERIES 95 SPECTRUM ENVELOPES

![Spectrum Envelope (100 MHz)](image1.png)

![Spectrum Envelope (250 MHz)](image2.png)

![Spectrum Envelope (500 MHz)](image3.png)

![Spectrum Envelope (1000 MHz)](image4.png)