

Multiple Frequency Comb Generator Instrument

Bench Top Instrument Case 3U High
RF Input Port: SMA Female
RF Output Port: SMA Female
Amplitude Modulation Control: BNC Female
AC Power Input, IEC & Fuse 240V, 50Hz
Controls: Power On/Off with Indicator
Frequency Select Switch
Lockable control knob for phase shift control
Additional phase shifter for use @ 2GHz

This is a bespoke example of a Multiple Frequency Generator used in up to the minute particle physics and materials science research.



Input Signal: 499.653644MHz
Input Signal Power: 0dBm min, +3dBm max

The input signal is amplified to provide power to a comb generator.
Frequencies are selected by a switched filter bank.
Signal control for AM modulation is provided by way of a voltage variable attenuator and phase shift control through a line stretcher.
The signal is then amplified to provide an output at one of the following 6 frequencies.

Output Frequencies:
#1: 1998.614576MHz
#2: 3997.229152MHz
#3: 4996.536440MHz
#4: 5995.843728MHz
#5: 7994.458304MHz
#6: 9993.072880MHz

Output Power: +27dBm (at each frequency)
AM: Attenuation Control >70dBc Modulation Speed 500ns
Output Phase Control: 360 deg.
An additional mechanical phase shifter will be supplied for use externally when 2GHz output frequency is selected.