

DPSIM -Doppler Target Generator

0.5 to 40 GHz Doppler Target Generator



40 GHz Doppler Simulator Provides Target Generation for Range Simulation and Test Laboratories

Microwave Photonic Systems, Inc has been a world leader in Radio Frequency (RF), Microwave, and Photonic Subsystems for over 20 years. The introduction of the (DPSIM) Doppler Target Generator product series augments MPS's support of the Radar, Telemetry, Communications and Research market segments.

Specifically, the (DPSIM) Doppler Target Simulator System provides the user a convenient method of generating Doppler shifts onto a reference RF input signal. The Doppler simulator is designed to provide adjustable Doppler shifts from - 4 MHz to + 4 MHz in 0.1 Hz steps. The low noise, high accuracy internal Doppler source provides stable, repeatable frequency offsets. It is an excellent system addition to all of MPS's Optical Delay Generation (ODG), fixed and variable optical delay lines. The combination of the MPS's DPSIM and ODG delay line solutions provide both time and frequency variations which creates a complete moving target simulation.

The DPSIM Doppler target simulator is packaged in 1RU chassis and is microprocessor controlled. All simulator functions are addressable via the menu driven, VFD front panel interface or via the Ethernet remote interface.

For more information, contact Microwave Photonic Systems at info@b2bphotonics.com.

Applications

- Signal Attributes Generation
- Range Emulation
- Radar Testing and Calibration
- Altimeter Verification
- Laboratory Research & Development

Features

- Doppler Shift Range, +/-4 MHz
- Available from 0.5 to 40 GHz
- Doppler Shift Resolution to 0.1Hz
- User Selectable Doppler Delays
- Low Noise Figure
- High Input 1dB Compression Level
- Low Phase Noise Design
- Graphical User Interface (GUI)
- Remote Ethernet Monitoring and Control
- Secure Firmware Based Solution
- Optional Blanking Control
- 2 Year Limited Warranty



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DPSIM Doppler Simulator Chassis Level Specifications - Unamplified

Center Frequency Passband	0.5 to 40 GHz, see part number generator
Input VSWR	1.7:1
Output VSWR	1.7:1
Doppler Range	> +/- 4 MHz, other ranges available
Doppler Resolution	< 0.1 Hz Steps
Doppler Side Band Suppression	> 25 dBc
RF Gain	> -10 dB
Noise Figure	< 10 dB
Input 1dB Compression Level (P1dB)	+11 dBm
Input third order intercept (IIP3)	+25 dBm
Power Supply, AC Auto-ranging	85 VAC -264 VAC, 47 to 60 Hz, Single Phase
RF Connectors	SMA Female, K-Female or V-Female depending on frequency
Operating Temperature	0°C to +40°C
Storage Temperature	-25°C to +85°C

DPSIM Doppler Simulator Chassis Level Specifications - Amplified

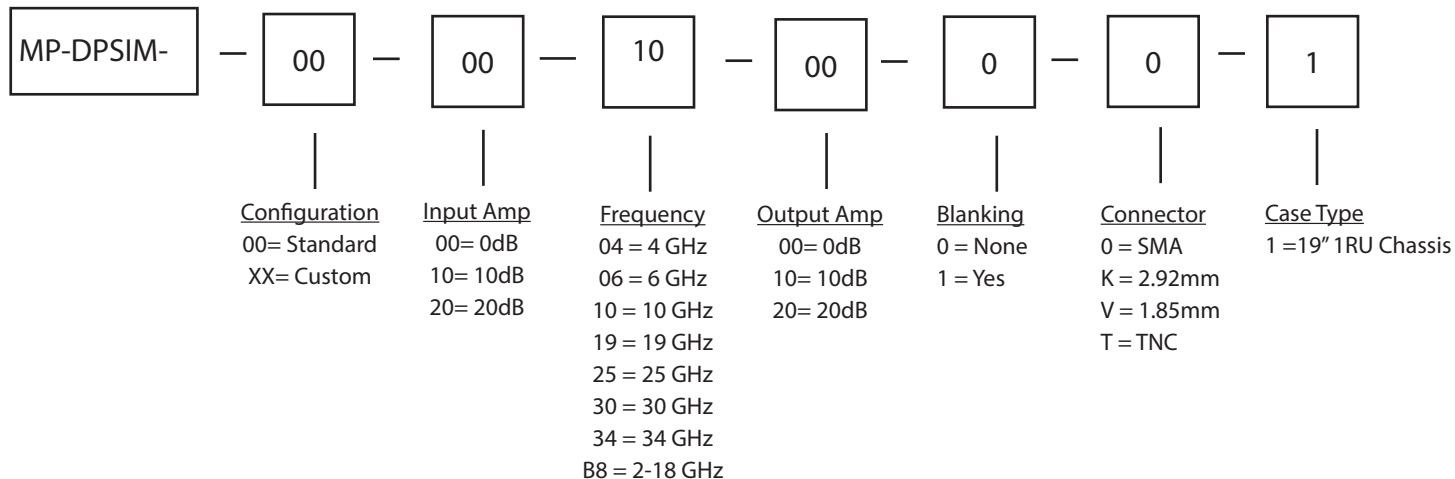
Center Frequency Passband	0.5 to 40 GHz, see part number generator
Input /	1.7:1
Output VSWR	1.7:1
Doppler Range	> +/- 4 MHz, other ranges available
Doppler Resolution	< 0.1 Hz Steps
Doppler Side Band Suppression	> 25 dBc
RF Gain	> +15 dB, other gains available on request
Noise Figure	< 4 dB,
Input 1dB Compression Level (P1dB)	-7 dBm
Input third order intercept (IIP3)	+4 dBm
Power Supply, AC Auto-ranging	85 VAC -264 VAC, 47 to 60 Hz, Single Phase
RF Connectors	SMA Female, K-Female or V-Female depending on frequency
Operating Temperature	0°C to +40°C
Storage Temperature	-25°C to +85°C
Local Indications	Power and Alarm LEDs
Local Status & Control	Front Panel Display (VFD) with Keypad
Remote Status & Control	Ethernet IP Addressable
DPSIM Dimensions & Weight	1RU x 19" x 22" & 20 lbs (US)

Note 1 : Unless stated otherwise all performance specifications are typical at 25C.
Contact factory with specific requirements

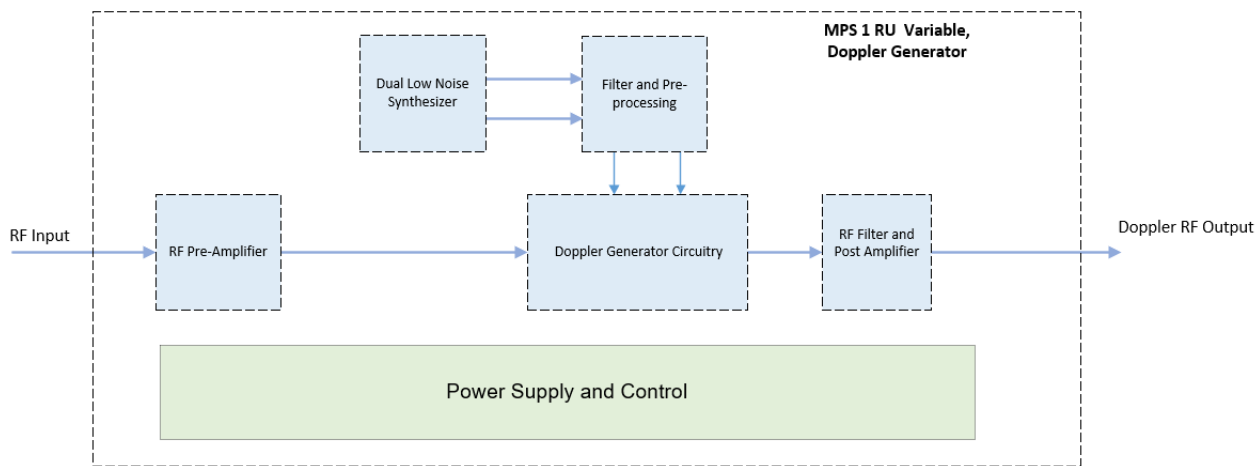
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DPSIM Part Number Generator



DPSIM Doppler Simulator Simplified Block Diagram



DPSIM -Doppler Target Generator

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DPSIM Doppler Simulator Chassis Level Outline Drawing

