PICOTEST

J2112A High Current Injector



Product specifications are subject to change without notice.

The J2112A Current Injector is an extremely versatile tool addition to the Picotest Signal Injector line-up. Coupled with the G5100A AWG, or other equivalent function generator, it is capable of performing small and large-signal load steps up to 40MHz, with up to 20ns rise/fall times, and with currents up to 1amp. Rise and fall times can be controlled and arbitrary waveforms can be used to drive the injector producing load current profiles of virtually any characteristic pattern. This is ideal for emulating all types of load conditions, including high speed digital circuit loading, battery discharge profiles, or spontaneous current spikes.

When coupled with a network analyzer, the J2112A Current Injector can be used to measure the output impedance of all types of circuits and systems including power supplies, voltage regulators, power buses, and batteries. It can be used to NON-INVASIVELY measure the stability of a combined input filter /negative resistance of a switching power supply or the phase margin of a linear or switching regulator WITHOUT the need to break the control loop.

The J2112A also supports applications in the measurement and extraction of transistor data, including current gain, Ft and many other dynamic performance parameters. In RF and instrumentation circuits it can be used to provide constant current biasing for class A amplifiers and buffers.

The Ultimate Controllable Current Source

The controlling input accepts an arbitrary user controlled DC+AC signal that can be taken from any DC source, signal generator or network analyzer. A built-in selectable bias current enables Class A operation for use with network analyzers.

The output current is reduced 40dB from the input signal, resulting in 10mA/V scaling. The current monitor output port is designed to be terminated into 50 Ohms and can be used with the network analyzer, an oscilloscope or a DMM to monitor the output current of the injector on a 0.1A/V scale.

KEY FEATURES:

J2112A Current Injector

- Fast Transient Load Stepping up to 1Amp
- 20nSec typ rise and fall time
- DC-40MHz usable range (interconnection dependent)
- Measures non-invasive phase margin, output impedance, reverse transfer, crosstalk, input filter stability
- Works with positive voltage sources
- Built in offset for use with Network Analyzer
- Precision current monitor with 50 Ohm output
- Works with any manufacturer's AWG, Function Generator or Network Analyzer
- Includes High PSRR Low Noise Regulator with Universal input

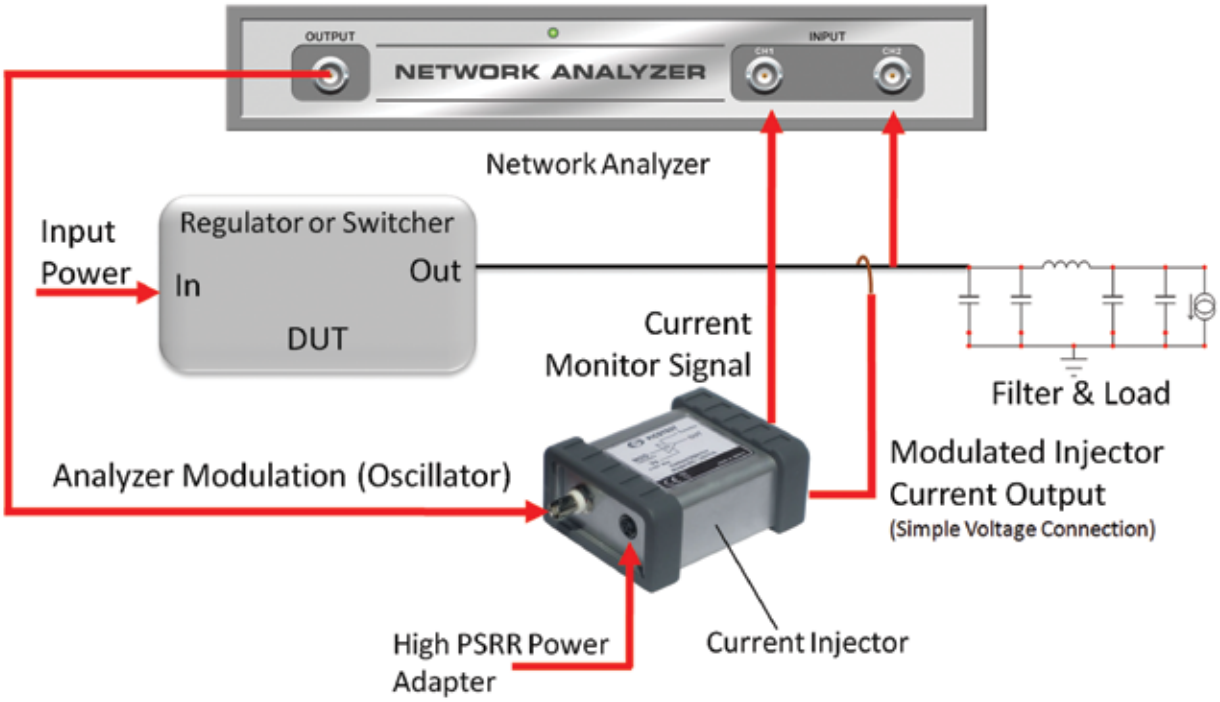
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Specifications		
Characteristic	**Typical**	**Units**
Max Input Voltage DC+AC	+5	V
Max Output Current	+1	A
Min Output Current	24	mA
Max Output Voltage	0.7 - 50	V
Current Monitor	0.1	V/A
Modulator Gain	0.2	A/V
Offset Current (typical)	+240	mA
-3dB Bandwidth (-10dBm)	DC-50	MHz
Temperature Range	0 - 50	C
Maximum Altitude	6000	Ft

Mechanical characteristics	
Dimensions (box only) (box + connectors)	109.22 mm x 89.66 mm x 50.80 mm 4.30" x3.53" x 2.00" 122.68 mm x 89.66 mm x 50.80 mm 4.83" x3.53" x 2.00"
Weight	0.210 kg / 0.463 lbs

Connectors	
Input	BNC
Output	Banana



The J2112A Current Injector supports non-invasive phase margin measurements. You can actually use it to measure the stability of your power supplies WITHOUT having to break the control loop. Simply connect the Current Injector output (+ and – leads) to the signal of interest and you can measure the impedance, stability, or step load response.

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