



Agilent 11930A/B Power Limiters

Technical Overview

dc to 6 GHz, 5 MHz to 6 GHz

- high power protection
- exceptional return loss

Increased power protection

The Agilent Technologies 11930A/B limiters provide input protection for a variety of RF and microwave instrumentation. For example, the input circuits of network analyzers may be protected for inputs up to 6 watts peak or 3 watts average power using the 11930A. The 11930B provides the same protection to spectrum analyzers and sources. At even greater power levels, failure mode for the limiter is either an open circuit or a short circuit to ground, thereby protecting the instrument from damage.

Excellent accuracy

The 11930A is furnished with an APC-7 connector and the 11930B has a type-N connector. These limiters offer low insertion loss and linear operation at low input levels while providing protection against transients or short duration overloads. In Figure 1, typical data for output power versus input power is shown for the 11930A/B. Figures 2 and 3 illustrate typical insertion loss and return loss.



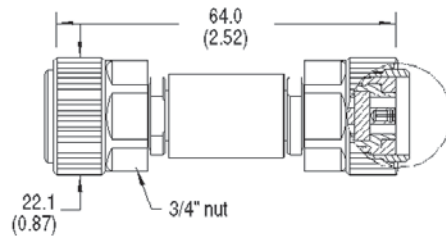
Specifications

Specifications describe the instrument's warranted performance over the temperature range 0 to 55 °C (except where noted). Supplemental Characteristics are intended to provide information useful in applying the instrument by giving typical but nonwarranted performance parameters. These are denoted as "typical," "nominal," or "approximate."

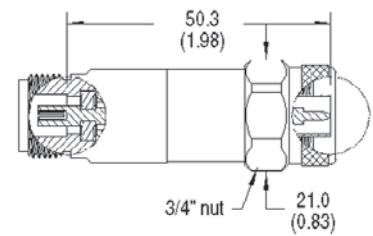
| Power limiters | 11930A | 11930B |
|-----------------------------------|--------------------------|-------------------------------------|
| Frequency range | DC to 6 GHz | 5 MHz to 6.5 GHz ¹ |
| Frequency response | | |
| Insertion loss | 1.0 dB dc to 3 GHz | 1.0 dB 16 MHz to 3 GHz ² |
| | 1.5 dB 3 to 6 GHz | 1.5 dB 3 to 6.5 GHz |
| Return loss | 22 dB 0.030 MHz to 3 GHz | 21 dB 16 MHz to 3 GHz ² |
| | 20 dB 3 to 6 GHz | 17 dB 3 to 6.5 GHz |
| Impedance | 50 Ω nominal | 50 Ω nominal |
| Maximum DC current | 350 mA | N/A |
| Maximum input power levels | | |
| Continuous | 3 watts | 3 watts |
| Pulse | 6 watts | 6 watts |
| Pulse width | 30 ms | 30 ms |
| Duty cycle | 10% | 10% |
| Limiting threshold | 30 dBm typical | 30 dBm typical |
| Maximum DC volt | 30 V | 30 V |

Mechanical Information

| | 1930A | 11930B |
|-------------------------------------|-------------|-------------|
| Dimensions mm (inches) ³ | 64 (2.52) | 50.3 (1.98) |
| Input/output connector | APC-7 | Type-N |
| Net weight kg (lb) 0.40 (0.18) | 0.40 (0.18) | 0.53 (0.24) |



11930A



11930B

1. Note: Dimensions are in millimeters (inches).
2. 6–6.5 GHz typical
3. 5–16 MHz insertion and return loss limited by internal 1500 pfarads blocking cap
4. length between mating surfaces of outer conductors

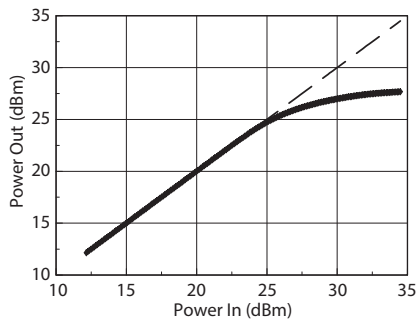


Figure 1. 11930A/B typical output power versus input power

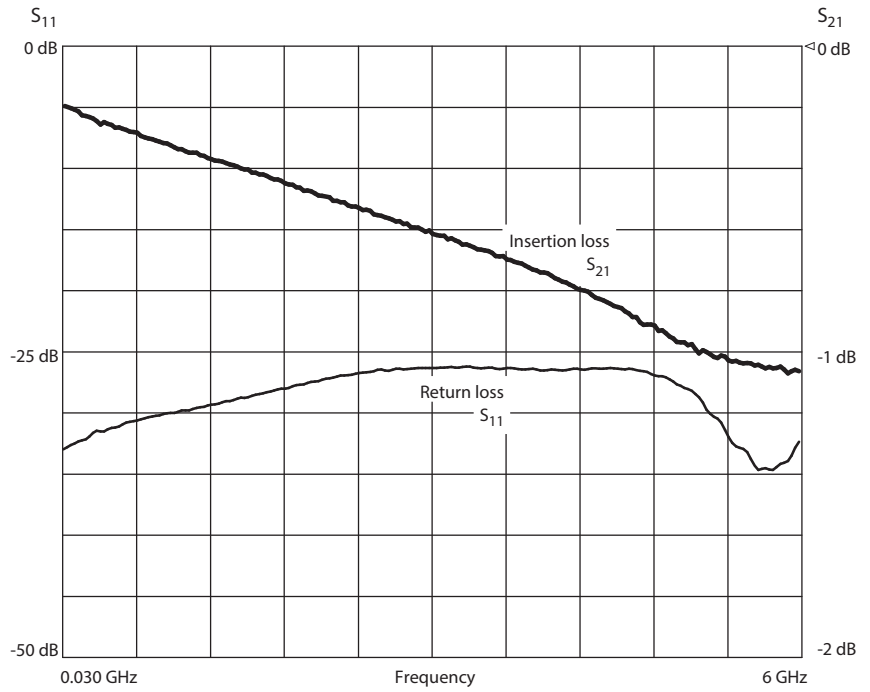


Figure 2. 11930A typical insertion and return loss versus frequency

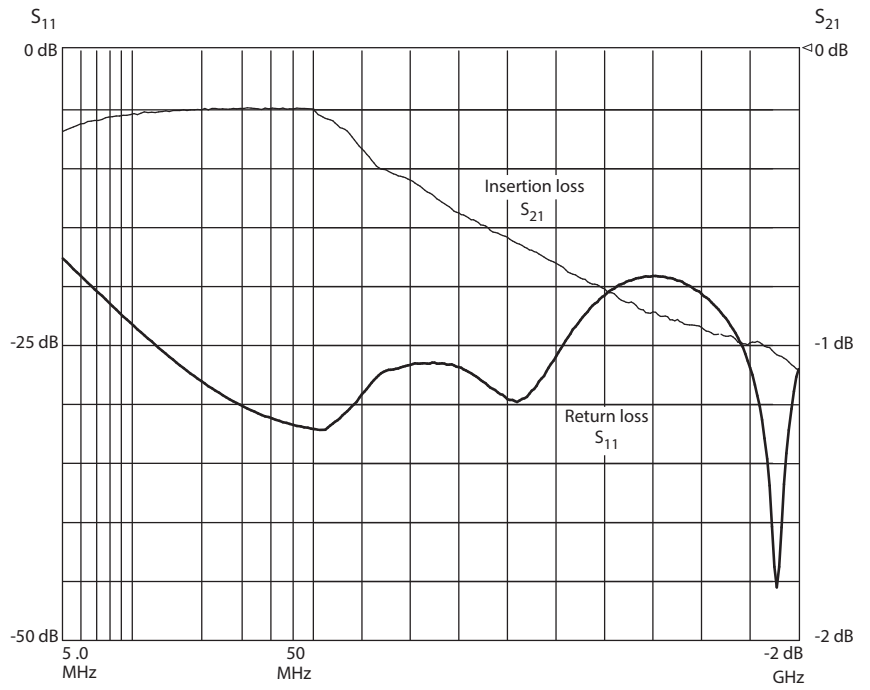


Figure 3. 11930B typical insertion and return loss versus frequency



myAgilent

www.agilent.com/find/myagilent

A personalized view into the information most relevant to you.



www.axiestandard.org

AdvancedTCA[®] Extensions for Instrumentation and Test (AXIe) is an open standard that extends the AdvancedTCA for general purpose and semiconductor test. Agilent is a founding member of the AXIe consortium.



www.lxistandard.org

LAN eXtensions for Instruments puts the power of Ethernet and the Web inside your test systems. Agilent is a founding member of the LXI consortium.



www.pxisa.org

PCI eXtensions for Instrumentation (PXI) modular instrumentation delivers a rugged, PC-based high-performance measurement and automation system.

Agilent Channel Partners

www.agilent.com/find/channelpartners

Get the best of both worlds: Agilent's measurement expertise and product breadth, combined with channel partner convenience.



Agilent Advantage Services

www.agilent.com/find/AdvantageServices

Accurate measurements throughout the life of your instruments.



www.agilent.com/quality

www.agilent.com
www.agilent.com/find/mta

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at: www.agilent.com/find/contactus

Americas

| | |
|---------------|----------------|
| Canada | (877) 894 4414 |
| Brazil | (11) 4197 3600 |
| Mexico | 01800 5064 800 |
| United States | (800) 829 4444 |

Asia Pacific

| | |
|--------------------|----------------|
| Australia | 1 800 629 485 |
| China | 800 810 0189 |
| Hong Kong | 800 938 693 |
| India | 1 800 112 929 |
| Japan | 0120 (421) 345 |
| Korea | 080 769 0800 |
| Malaysia | 1 800 888 848 |
| Singapore | 1 800 375 8100 |
| Taiwan | 0800 047 866 |
| Other AP Countries | (65) 375 8100 |

Europe & Middle East

| | |
|----------------|----------------------|
| Belgium | 32 (0) 2 404 93 40 |
| Denmark | 45 45 80 12 15 |
| Finland | 358 (0) 10 855 2100 |
| France | 0825 010 700* |
| | *0.125 €/minute |
| Germany | 49 (0) 7031 464 6333 |
| Ireland | 1890 924 204 |
| Israel | 972-3-9288-504/544 |
| Italy | 39 02 92 60 8484 |
| Netherlands | 31 (0) 20 547 2111 |
| Spain | 34 (91) 631 3300 |
| Sweden | 0200-88 22 55 |
| United Kingdom | 44 (0) 118 927 6201 |

For other unlisted countries:

www.agilent.com/find/contactus

(BP-3-1-13)

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2013
Published in USA, June 6, 2013
5966-2006E



Agilent Technologies