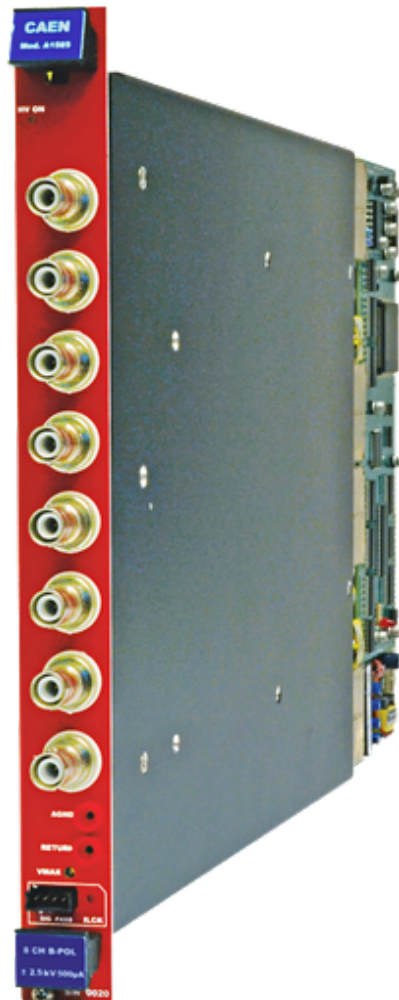
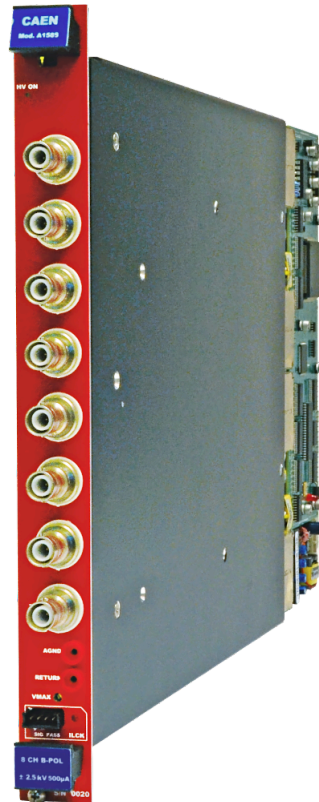


A1589

8 Channel ± 2.5 kV/500 μ A 4 Quadrant Bipolar Board



Features



- 8 independently controllable High Voltage channels
- Four-quadrant bipolar channels
- SHV coaxial connector
- Common floating return shared by all channels
- Low ripple
- Excellent long-term output stability
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for unit enable
- Software Tool for easy channel management

Description

The CAEN **Mod.A1589** board contains 8 independent channels providing high-voltage through SHV connectors; it is compatible with the CAEN Universal Multichannel Power Supply System (SY1527, SY2527, **SY4527, SY5527**).

SHV connector

Single width (5 TE wide), 8 channel for Mod. A1589

Consult our **connectors reference page** for technical information.

All channels are differential and can operate in the so called four-quadrant regimes supplying or operating as resistive load. It can provide, with an excellent long term output stability. It ensures a voltage stability within 10 mVpp, with 100 mV setting resolution. Moreover, the channels share a **common floating return**, which allows on-detector grounding reducing the noise level; the floating return is insulated from the crate earth up to ± 50 V (with a 65V hardware limit). The board is provided with both current and voltage protections. The HV Ramp-up and Ramp-down rates may be selected independently for each channel in the $1 \div 500$ V/s range (1 V/s step).

Safety features allows the module to perform as a current generator and includes:

Channels	can be enabled or disabled through the Global Interlock logic.
Overvoltage and Undervoltage warning	when the output voltage differs from the programmed value. For each channel, it is also possible to set an output current limit in the $0 \div 15$ mA range, in 250 nA steps.
Overcurrent detection	when a channel attempts to exceed the programmed current limit, it signalled to be in "overcurrent" and enter in a TRIP status. The output voltage is varied to keep the current below the programmed limit for a programmable TRIP time, then the channel is switched off. If TRIP is set to "constant current mode", the channel behaves like a current generator.
Hardware VMAX	maximum output voltage can be set via front panel potentiometer, at the same common value for all the board channels. VMAX value can be read out via software.

Technical Specifications

No. of Channels

8 (Common Floating Return)

Polarity

Four-quadrant bipolar

Max. Output Current

500 μ A

Voltage Set Resolution

100 mV

Voltage Monitor Resolution

100 mV

Current Set Resolution

100 nA

Current Monitor Resolution

100 nA

Ramp Up / Down

1 \div 500 Volt/sec, 1 Volt/sec step

VMAX hardware

2.5 kV

VMAX hardware accuracy

\pm 2% of FSR

VMAX software

2.5 kV

VMAX software Resolution

1 V

Ripple

< 10 mVpp (Typical; common mode; 10 Hz \div 20 MHz range)

Voltage Set vs. Output Voltage Accuracy

\pm 0.02% of setting \pm 0.03% of Max Output Voltage

Voltage Monitor vs. Output Voltage Accuracy

\pm 0.02% of setting \pm 0.03% of Max Output Voltage

Current Monitor vs. Output Current Accuracy

$\pm 0.02\%$ of reading ± 50 nA

Current Set vs. Output Current Accuracy

$\pm 0.02\%$ of setting ± 50 nA

Max Power per Channel

1.25 W

Long Term Stability (24h)

< 50 ppm * FSR

Vout / Temperature coefficient

< 50 ppm / $^{\circ}\text{C}$

Ordering Options

Code	Description	
WA1589XAAAAA	A1589 - SYx527 4 Quadrant Bipolar 8 HV Ch's $\pm 2.5\text{kV}/500\mu\text{A}$ - SHV Conn	RoHS

Accessories

HV CABLES



High Voltage Cable Assemblies

Related Products

SY5527



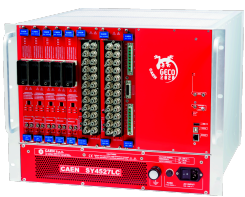
Universal Multichannel Power Supply System / 19"wide, 4U-high (6 slot)

SY4527



Universal Multichannel Power Supply System / 19"wide, 8U-high (16 slot)

SY4527LC



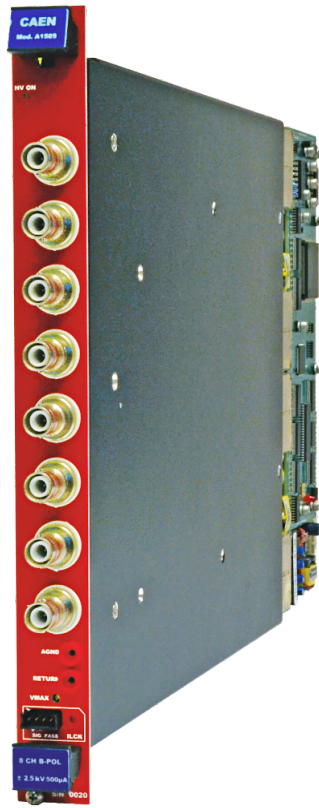
Universal Multichannel Power Supply System Low Cost / 19"wide, 8U-high (10 slot)

SY5527LC



Universal Multichannel Power Supply System Low Cost / 19"wide, 4U-high (4 slot)

Gallery



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