

## Mini High Voltage Modules ABC 550-Series

### Description

The ABC series of DC/DC converters has been designed for optimum avalanche photodiode (APD) performance. The output voltage is precisely adjustable and highly stable and the temperature coefficient of the output voltage can be exactly adapted to the properties of the APD. Discrete APDs as well as APD modules with integrated temperature sensors can be controlled using the ABC series. The output current is limited to a safe level so that the APD is protected against overload. A precise reference voltage source is built in. The output voltage can be adjusted either with a simple potential divider or with an external control voltage. By means of an additional control voltage the amplification of the APD can either be adjusted with a closed loop or be precisely modulated. The device has a wide operating voltage range from 10 to 18 V. A silicon diode is used as temperature sensor and is supplied for the -04 and -06 versions.



### Features

- Positive or negative output voltage up to 500 V
- Adjustable temperature
- High accuracy < 0.2 %
- High stability < 0.01%
- Short-circuit proof
- Low ripple
- Compact shielded housing

### Options

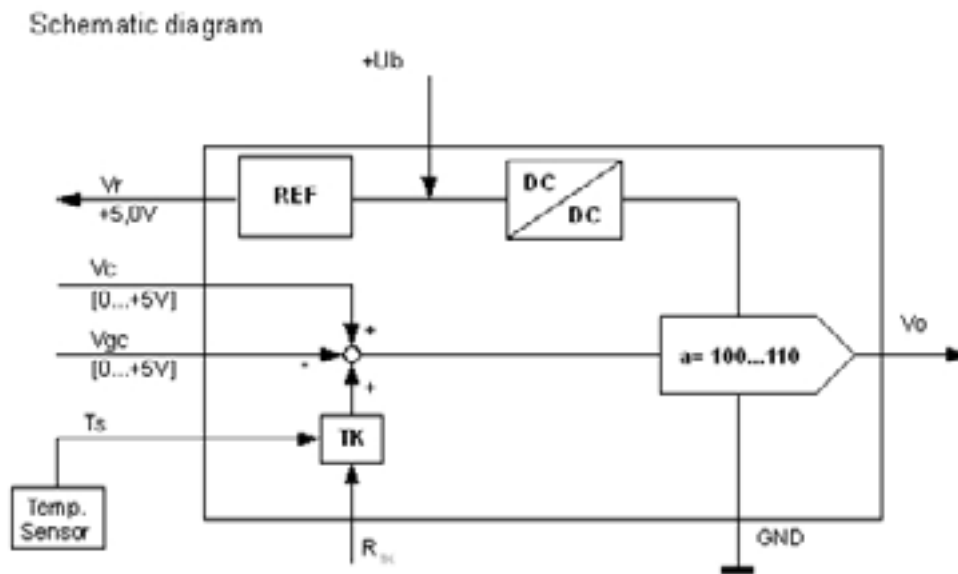
- Temperature coefficient permanently
- Set internally
- Negative temperature coefficient
- Output voltage permanently set internally
- Adaptation to APD modules with integrated temperature sensor
- Optimized OEM-Versions

Technical Specifications

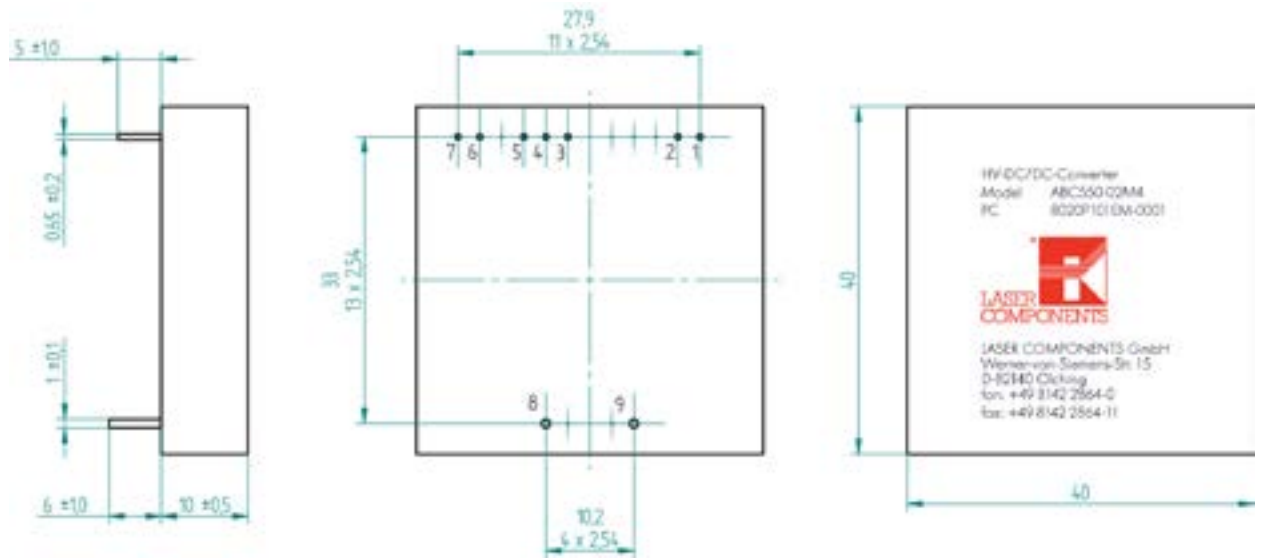
ABC series	550-04	550-05	550-06
Operating voltage	+10 ... +18 VDC	+10 ... +18 VDC	+10 ... +18 VDC
Setting of amplifier	0 ... +5.0 VDC	0 ... +5.0 VDC	0 ... +5.0 VDC
Control voltage	0 ... +5.0 VDC	0 ... +5.0 VDC	0 ... +5.0 VDC
Reference voltage	+5.050 VDC	+5.050 VDC	+5.050 VDC
Temperature sensor	temperature dependent resistor*	Si-P-N-Diode	temperature dependent resistor*
Output voltage	+10 ... +500 VDC	+10 ... +500 VDC	-10 ... -500 VDC
Output current	max. 0.2 mA	max. 0.2 mA	max. 0.2 mA
Measures	40 x 40 x 10 mm	40 x 40 x 10 mm	40 x 40 x 10 mm
Weight	35 g	35 g	35 g

\*i.e.: KTY 11-7, supplied with the module

Functional Diagram of ABC 550-Series



Package Drawing



Bottom view

Note: Pin 2 is not present on the ABC550-05

Connection Configuration

Pin	Name	Function	Characteristic
1	+VB	Supply voltage	12 (typical) VDC
2*	VGC	Amplification calibration	0 ... +5.0 VDC
3	GND	Ground	-/-
4	VC	Control voltage	see page 2
5	VR	Reference voltage	+5.050 VDC
6	TS	Temperature sensor	
7	TK	TK calibration	
8	GND	Ground	
9	+V0	Output voltage	VDC Max. 0.2 mA

\*Not applicable to ABC550-05

## Product Changes

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## Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website [www.lasercomponents.com](http://www.lasercomponents.com).

Custom designed products are available on request.

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