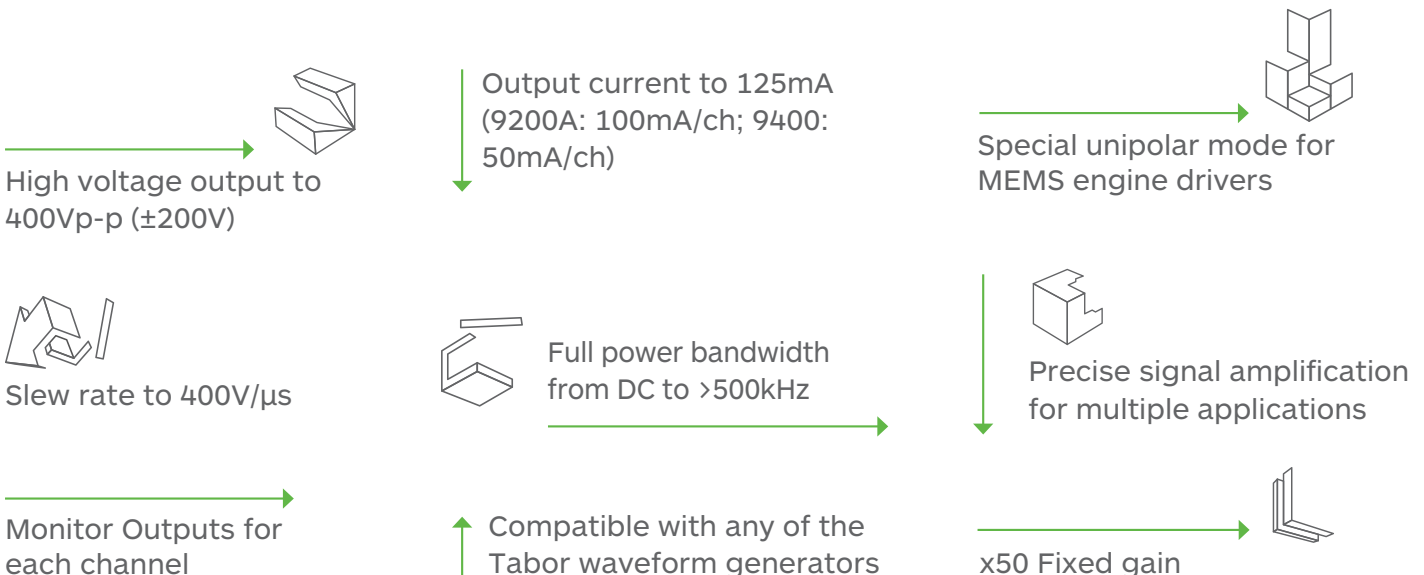


9100A/9200A/9400A-DST

400Vp-p Single, Dual & Four Channel Signal Amplifiers



The 9x00A-DST series was designed as a general purpose, wide band and high voltage amplifier having specific applications in mind. It has up to 4 channels built in a small case size to save space and cost, without compromising bandwidth and signal integrity. The 9x00A-DST can output signals from -200V to +200V with continuous currents up to 125mA. The output is driven from a 0.1W source and, with some degradation of its bandwidth, can drive capacitive loads up to 1nF, while maintaining its full amplitude range. The series has rear-panel monitor outputs that divides the main outputs signal by 100 for applications that require monitoring of the output signal with low voltage sensors.



Modes of Operation

The 9x00A-DST has two modes of operation. The first is normal mode, where each channel amplifies and outputs bipolar signals with a gain of x50. In this mode, the input signal is amplified and delivered to the output terminals, which can be used separately to amplify a unique signal, without modification of its original properties, except its amplitude level. The second mode of operation is the unipolar mode, where the signal is applied to one input, rectified, amplified and output through two separate outputs.

Target Applications

The 9x00A-DST is an ideal solution for virtually any high-voltage, wide-band application, from MEMS micro engine, to any other applications requiring precise conversion to unipolar signals.

Safety

Safety played a major role during the design of the Model 9x00A-DST. The high voltage path to the amplifier circuit is blocked by a front panel mechanical switch and accidental application of high power to the UUT is prevented by a safety latch. The 9x00A will output high voltage signals only after the safety latch has been lifted and the high voltage switch flipped to ON position. In emergency situations, one can hit the protective latch to immediately remove the high voltage power from the output terminals. As an additional visual safety feature, a red light glows on the front panel whenever the high voltage is turned on.

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Specifications

CONFIGURATION	
9100A-DST	1 single-ended output
9200A-DST	
Single-ended:	2 separate inputs and two single-ended outputs, bipolar voltage
Unipolar:	1 separate input, two output channels with 180° phase offset, unipolar voltage outputs
9400A-DST	
Single-ended:	4 separate inputs and two single-ended outputs, bipolar voltage
Unipolar:	2 separate input, two output channels with 180° phase offset, unipolar voltage outputs

INPUT CHARACTERISTICS	
Connectors:	Front panel BNCs
Impedance:	1MΩ
Coupling:	DC
Amplitude Level:	8Vp-p (±4V peaks)
Frequency Range:	
Full Power:	DC to 500kHz
Unipolar Mode:	DC to 200kHz
Max. Out. Current:	
9100A-DST:	125mA
9200A-DST:	100mA, per channel
9400A-DST:	50mA, per channel

OUTPUT MONITOR CHARACTERISTICS	
Connectors:	Rear panel BNCs
Source Impedance:	3kΩ
Load Impedance:	1MΩ
Ratio:	10/100MHz

OUTPUT CHARACTERISTICS	
Connectors:	Front panel BNCs
Source Impedance:	0.1Ω
Load Impedance:	
Resistive:	Recommended for full power bandwidth spec, load resistance limited by the output current.
Capacitive:	Up to 100pF has minimal effect on bandwidth, 1nF reduces the full power bandwidth to 100kHz
Coupling:	DC
Protection:	Short-circuit, 10 seconds
Gain:	x50, fixed
Polarity:	Output normal; half wave rectified
Amplitude:	
Full Power:	400Vp-p (±200V)
Unipolar Mode:	0 to +200V

SQUARE WAVE CHARACTERISTICS	
Transition Time:	<1μs
Aberrations:	<10%

SINE WAVE CHARACTERISTICS	
Bandwidth:	-3dB
Small Signal:	1.5MHz, at 20Vp-p
Large Signal:	500kHz, at 400Vp-p
Accuracy:	(2% of full-scale amplitude range+50mV), Square wave at 1kHz
THD:	
10Hz to 50kHz:	0.1%
50kHz to 200kHz:	0.8%

GENERAL	
Voltage:	100V or 115V to 230V
Power Consumption:	120W max.
Dimensions (WxHxD):	
With Feet	315 x 102 x 395 mm
Without Feet	315 x 88 x 395 mm
Weight:	
Without Package	6.5 Kg
Shipping Weight	7.5 Kg
Temperature:	
Operating	0°C to +40°C
Storage	-40°C to +70°C
Warm up time:	30 minutes
Humidity:	85% , non-condensing
Safety:	CE Marked, IEC61010-1:2010
EMC:	IEC 61326-1:2013
Calibration:	1 years
Warranty:	1 year

ORDERING INFORMATION	
MODEL	DESCRIPTION
9100A-DST	400Vp-p Single Channel Signal Amplifier
9200A-DST	400Vp-p Dual Channel Signal Amplifier
9400A-DST	400Vp-p Four Channel Signal Amplifier

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