

# Broadband amplifiers DC to 500 kHz with integral feedback voltage protection 63 W output power

**TOE 7608**  
**TOE 7608 S**



TOE 7608

Function/signal generators generally provide signals with a small amplitude into 50-Ohm systems.

Signal conditioning and amplification are therefore required in many technical areas.

The TOE 7608 broadband amplifier is suitable as a non-inverting power output stage for the amplification of such signal sources. Each generator with an output voltage of 20 V<sub>pp</sub> is able to cover the full operating range of the TOE 7608 amplifier; the power is 63 W into 8 Ohm at a max. output amplitude of 45 V<sub>pp</sub>. The bandwidth is DC to 500 kHz.

Overcurrent protection at the output, protection against feedback voltages, and overtemperature protection provide the amplifier with a high degree of operational safety.

The TOE 7608 S is a special version and provides higher output voltages in a limited frequency range.

Voltages up to 115 V<sub>rms</sub> into 400 Ohm can be generated in this case at an output power of > 30 W and in a frequency range from 15 Hz to 20 kHz. Other output voltages (e.g. 230 V<sub>rms</sub>) or frequency ranges are available on request.

## Special features

- Frequency range DC to 500 kHz
- Short-circuit and no-load proof
- Feedback voltage protection up to 120 V
- 115 V<sub>rms</sub> output voltage with TOE 7608 S

## Technical specifications

Amplifier data **TOE 7608**

<b>Frequency range</b>	0 to 500 kHz (-3 dB)
<b>AC coupling</b>	Approx. 3 Hz to 500 kHz (-3 dB)
<b>Gain</b>	Non-inverting, fixed at +7 dB with input impedance > 10 kOhm, +13 dB with input impedance 50 Ohm
<b>Input impedance</b>	
AC coupling	> 10 kOhm (pass band)
DC coupling	> 10 kOhm or 50 Ohm, selectable
Permissible input voltage	Max. 10 V <sub>rms</sub> , continuous
<b>Output impedance</b>	Approx. 0.2 Ohm, short-circuit proof
<b>Output voltage</b>	Max. ± 22.5 V into 8 Ohm load Response times: t <sub>r</sub> , t <sub>f</sub> < 0.8 µs
<b>Output noise</b>	< 1 mV <sub>rms</sub> with short-circuited input
<b>Distortion</b>	< 0.1 % up to 50 kHz, < 0.2 % up to 100 kHz
<b>Feedback voltage protection</b>	Up to 120 V, fused by F4AC in accordance with DIN 41661, IEC 127-2/11

## Technical specifications

Amplifier data **TOE 7608 S**

<b>Frequency range</b>	15 Hz to 20 kHz (-3 dB)
<b>Gain</b>	Non-inverting, fixed at +25.6 dB with input impedance > 10 kOhm, +31.6 dB with input impedance 50 Ohm
<b>Input impedance</b>	
AC coupling	> 10 kOhm (pass band)
DC coupling	> 10 kOhm or 50 Ohm, selectable
Permissible input voltage	Max. 10 V <sub>rms</sub> , continuous
<b>Output impedance</b>	Approx. 70 Ohm, short-circuit proof
<b>Output voltage</b>	Max. 115 V <sub>rms</sub> into 400 Ohm load
<b>Output noise</b>	< 5 mV <sub>rms</sub> with short-circuited input
<b>Distortion factor</b>	< 0.5 % at V <sub>out</sub> < 100 V <sub>rms</sub> into 400 Ohm load in frequency range 50 Hz to 20 kHz
<b>Feedback voltage protection</b>	Fused by F 0.5 AC in accordance with DIN 41661, IEC 127-2/11

## General data

<b>Line voltage</b>	115V/230 V ± 10 %, 47 Hz to 63 Hz
<b>Amplifier fusing</b>	115 V: T4AC, 230 V: T2AC in accordance with DIN 41662, IEC 127-2/11
<b>Power consumption</b>	Max. 180 VA
<b>Operating temperature</b>	0 °C to 50 °C
<b>Dimensions</b> (W x H x D)	265 x 147 x 375 mm
<b>Weight</b>	Approx. 8.2 kg
<b>Housing</b>	Aluminium

## Ordering data

Broadband amplifier	TOE 7608
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## Options

TOE 9008	Carrying handle
TOE 9501	19" adapter, 3 HU
TOE 9503	19" rack module, 4 HU