

Piezo Motor Driver and Amplifier

High-frequency and high-current driver for piezoelectric devices

Piezo motors are found in many precision electromechanical applications. Driving a [piezo motor](#) actuator requires a high-voltage, high-current, and high-speed driver. The TS200 and the TS250 are high-voltage and high-current driver/amplifier designed for driving piezoelectric motors and actuators, piezoelectric stages, and other piezoelectric components. Its high output current (5A peak-to-peak) is ideal for driving piezoelement's high capacitance. The TS200/TS250 achieved unprecedented 1MHz small-signal and 70kHz full-power bandwidth is ideal for [piezoelectric amplifier](#). In addition, these two piezo motor driver instruments found in many other applications such as driving electrolytic cells and electrochemical cells, high-speed plasma physics, optical switches and modulators, vibration control, thermal generation, and AC Helmholtz coil. The TS200 and the TS250 piezoelectric amplifiers are easy to use while they are housed in a rugged chassis makes them ideal for general laboratory, industrial and scientific, university and R & D applications. Several high-voltage and high-current amp models are available for piezoelectric driver as shown in the table below.

Piezo Motor Driver Using TS250 or TS200

Table 1. High-Current Piezo Amplifier and Motor Driver Selection

Model	Voltage Range	DC Current	Max Peak Current
TS200-0A/B	-10V to + 10V	0 – 4.0A	0 – 5.0A
TS200-1B	-20V to + 20V	0 – 2.8A	0 – 3.8A
TS200-2B	-20V to + 45V	0 – 1.4A	0 – 2.0A
TS200-3B	-10V to + 70V	0 – 1.4A	0 – 2.0A
TS200-4A/B	0V to + 15V	0 – 3.5A	0 – 4.5A
TS200-5B	-40V to + 40V	0 – 1.4A	0 – 2.0A
TS250-0	-10V to + 10V	0 – 5.0A	0 – 6.0A
TS250-1	-20V to + 20V	0 – 3.1A	0 – 4.4A
TS250-2	-30V to + 30V	0 – 2.1A	0 – 3.0A
TS250-3	-40V to + 40V	0 – 1.7A	0 – 2.5A
TS250-4	-6V to + 15V	0 – 4.0A	0 – 5.0A
TS250-5	-6V to + 30V	0 – 2.1A	0 – 3.0A
TS250-6	-6V to + 45V	0 – 1.7A	0 – 2.5A
TS250-7	-6V to + 65V	0 – 2.1A	0 – 2.5A

* Rated output current is achieved with large voltage amplitude into resistive load. Current is de-rated with smaller voltage amplitude.

● **Application Examples**

- Piezoelectric motor driver
- Piezo actuators
- Piezo stages
- Piezoelectric transducers
- Piezo sensor
- Piezoelectric stack actuator
- Piezo bimorph
- Piezoelectric vibration control
- Microscopy
- Plasma physics
- Optical switches and modulators
- Scientific and industrial and material testing
- Circuit characterization
- Magnetic coils (Helmholtz coil)
- Electrolytic/Electrochemical cells
- MEMS
- Automotive transient test
- General lab and university R&D