

CTEC released its new range of Switching Amplifier SA75X boards rack mounted for driving low voltage Piezo Actuators in dynamic condition. The driver board rack mounted comes in 3 models A, B & D aiming at providing a large amount of continuous output current respectively from 5, 10 and 20 Amps under 150 V max voltage. The A, B and D models are delivered inside a RK84F- 4H rack with a max number of channels respectively of 2, 2 and 1 (see figure 1 showing the SA75D).

The main advantage of the SA75X is to expand the working bandwidth of low voltage piezo ceramic based preloaded actuators. For instance, the SA75D can drive 2 APA1000XL in parallel (220 uF capacitance) at full 1 mm stroke up to 170 Hz. The standard configuration is rack mounted for use in laboratory but CTEC can develop OEM board version under specifications for embedded applications.

These COMPACT, DYNAMIC & PRECISE SA75X piezo drivers are adapted to air & space applications (as well many other applications) when driving large piezo actuators with low volume & low power consumption is required. Another advantage of the SA75X is its high power-to-mass ratio and its very high efficiency. The output reactive power is 10 times larger the input power. This is due to its switching topology and its intrinsic energy recovery.



Fig1: Switching Amplifier SA75D

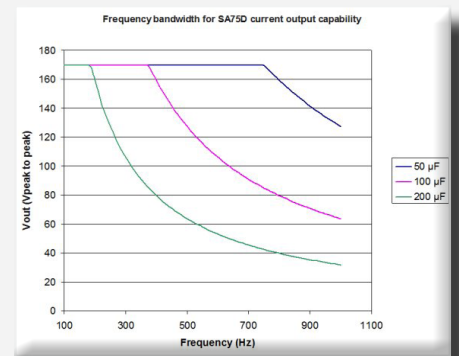


Fig2: Output bandwidth of SA75D for large piezo actuators

| REFERENCES | UNIT | SA75A | SA75B | SA75D |
|---------------------------|------|------------------|------------------|------------------|
| Item Code | | V-SA75A | V-SA75B | V-SA75D |
| Notes | - | Preliminary data | Preliminary data | Preliminary data |
| Max. number of channels | - | 2 | 2 | 1 |
| Main voltage | VDC | 0 / 240 | 0 / 240 | 0 / 240 |
| Output voltage | V | -20 / 150 | -20 / 150 | -20 / 150 |
| Min Output voltage | V | -20 | -20 | -20 |
| Max Output voltage | V | 150 | 150 | 150 |
| Voltage Gain | V/V | 20 | 20 | 20 |
| Max average current | A | 5 | 10 | 20 |
| Max average power | VA | 320 | 630 | 1370 |
| Output load capacitance | µF | 400 | 400 | 400 |
| Control input voltage | V | -1 ... 7.5 | -1 ... 7.5 | -1 ... 7.5 |
| Min input voltage | V | -1 | -1 | -1 |
| Max input voltage | V | 7.5 | 7.5 | 7.5 |
| Ripple current | % | 8 | 8 | 8 |
| Total Harmonic distortion | % | 2 | 2 | 2 |
| Signal / Noise ratio | dB | 60 | 60 | 60 |
| Loaded output bandwidth | Hz | 130 | 260 | 520 |
| Unloaded output bandwidth | Hz | 1500 | 1500 | 1500 |

Tab1: SA75X Performances
X=A,B or D)

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