

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.



Fig. 1: Switching Amplifier SA75D

Frequency bandwidth for SA75D current output capability

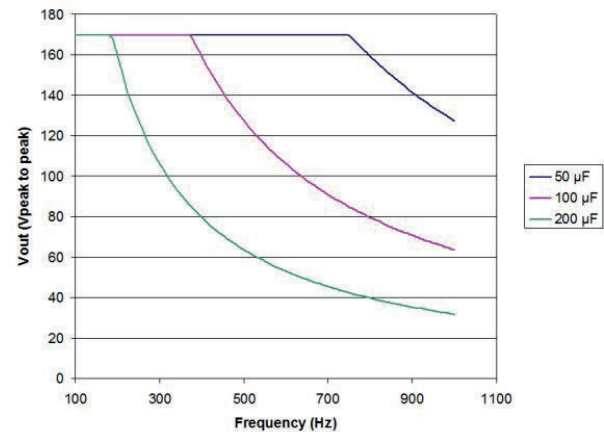


Fig. 2: Output bandwidth of SA75D for large piezo actuators

REFERENCES	UNIT	SA75A	SA75B	SA75D
> Notes		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 distorsion	%	2	2	2
Signal / Noise ratio	dB	60	60	60
Loaded output bandwidth	Hz	130	260	520
Unloaded output bandwidth	Hz	1500	1500	1500

Table 1: Performances of SA75X - X=A, B or D