

APPLICATIONS

- > Piezo drive up to 1 channel
- > Dynamic operation of high capacitance piezo actuator
- > Fast actuation
- > Forced vibration generation

KEY FEATURES

- > 10 A continuous output current
- > Energy recovery
- > High power density
- > [-20 V;150 V] output voltage range
- > High efficiency
- > Active power factor correction
- > Galvanic isolation
- > Temperature protection for actuators

RELATED PRODUCT

- > Piezo actuators and stages
- > CTEC Powered 19" subrack
- > UC45 / UC55 Controllers
- > SG75 / ECS75 sensors conditioners



SPECIFICATIONS

PARAMETER	TYPICAL VALUE	UNIT
> General		
Function	Driver for piezoelectric actuator	
Number of channels	1	
> Input		
Control input voltage	-1 ... +7.5	V
Control input impedance	10	kΩ
> Output		
Output voltage ⁽¹⁾	-20 ... +150	V
Continuous peak output current ⁽²⁾	±10	A
Maximum output load	400	μF
Output impedance	100	μH
> Power amplifier		
Typical efficiency	94	%
Switching frequency	200	kHz
Peak output power ⁽³⁾	1500	VA
> Gain		
Gain	20	V/V
Gain error	±1	%
Gain linearity error	0.1	%

> Dynamic performance

Small signal bandwidth (-3dB) ⁽⁴⁾	3800	Hz
Power bandwidth (-3dB)	See chart	Hz
Max. current slew rate	3.3	A/μs

> Accuracy

THD ⁽⁵⁾	0.7	%
Signal to Noise Ratio ^{(6) (7)}	60	dB

> Protections

Amplifier : Overcurrent, Overtemperature, Overvoltage
Actuator : Overcurrent, Overtemperature

ANNOTATIONS

Guaranted in labs environment

(1) Electronically limited, can be increased to -200 ... +200V upon request

(2) Internally limited

(3) Max. instantaneous output power = $\max(p(t)) = \max(u(t) \times i(t))$

(4) Unloaded. Order = 1Vpp

(5) With 30μF load at 160Vpp

(6) With 30μF load. Order = 0V

(7) Computed as RMS output signal/ RMS output Noise floor. 40 Hz ... 20 kHz

MISCELLANEOUS

PARAMETER	TYPICAL VALUE	UNIT
Mass	1.3 (1 channel)	kg
Front face dimension	24F wide, 3U high	
Rack compatibility	RK84F4U-SC75	
Cooling	Forced air	
Operating temperature range	0 ... +40	°C
Storage temperature range	-10 ... +50	°C

INTERFACES

Order input	BNC type
Piezo actuator output	LEMO EGG 2B 302 CLL
DC offset	15 turns screw potentiometer
DC offset range	-1 ... 7.5 V
Servo ON/OFF	Selector for control loop
Piezo actuator temperature input	EPG-00-302-NLN
Piezo actuator temperature output	TE connectivity : 1-1337480-0

INCLUDED ACCESSORIES

> **Piezo cable** Shielded 1.5m - Lemo connector / 2x banana 4mm plug

OPTIONS

> **UC55** Controller for position loop
See specific datasheet

> **Piezo cable** Specific length on request

> **Multi outputs LEMO front panel** Allows to connect several actuators in parallel
Please contact CTEC for more details

DRAWINGS

