



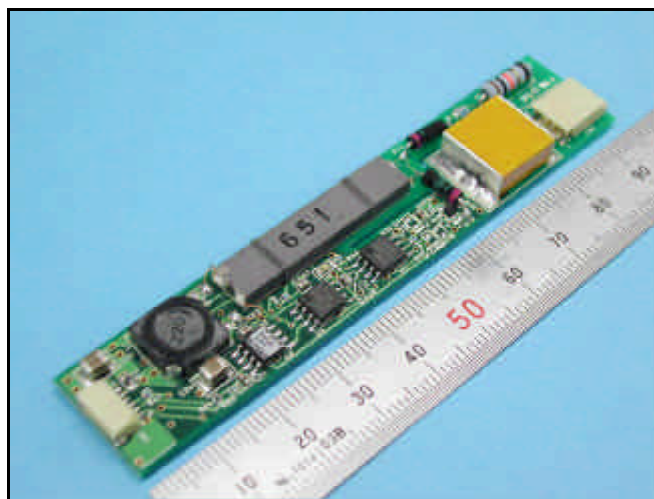
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Date: Jan. 29, 2009  
DWG. No.: AS-A8004-1

## Product Specifications

Product Name: PZT High Voltage Power Supply

Product Number: PPT04P2020XB1



Approval:

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### 0 Revision History

**Table 0.1 Revision History**

No.	Reason of Revision	Date	Rvsd	Appd
0	First	Jan/15/2009	<b>Endo</b>	

**1 Application**

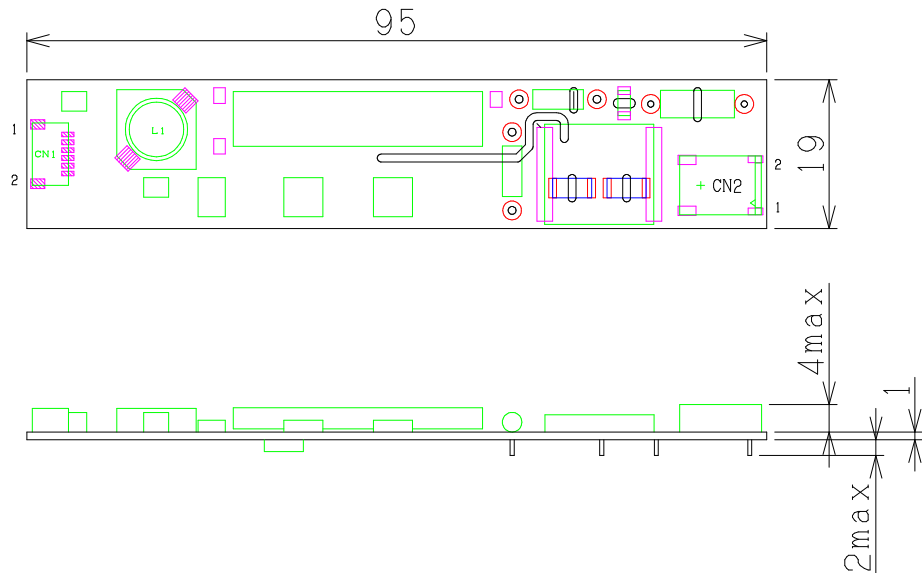
This specification applies to the PZT High Voltage Power Supply PPT04P2020XB1.

**2 Electrical characteristic**

**Table 2.1 Electrical characteristic**

Items	Symbol	Specification	Remarks
Input voltage	Vcc	8V - 14V	
Output voltage range	Vout	0V to +2000V max	Vcon = 0 - 10V
Output current	Iout	2mA max	
Output power	P	4W max	
Control voltage	Vcon	0V - 10V	
Shut-off current	Ioff	> 4.4+/-0.3mA	
Ripple	Rip	0.1%p-p max	

**3 Dimension**



Unit:mm

Length	Tolerance
<4	±0.2
4 ~ <16	±0.3
16 ~ <74	±0.5
74 ~ <250	±0.8
250 ~ <1000	±1.2

※ Installation dimensions tolerance of a part is ±0.5mm.

**Fig. 3.1 Dimension**

#### 4 Input & Output connector

1) CN1: Input connector - SM06B-SRSS-TB( JST)

**Table 4.1 CN1 Pin assign**

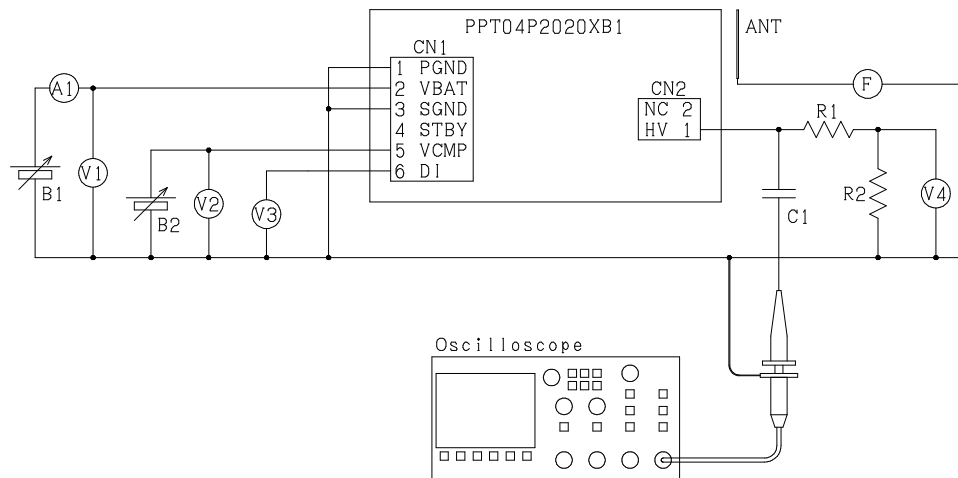
Pin	Symbol	Function	Remarks
1	PGND	GND	0V
2	VBAT	Input power	8.0V - 14V
3	SGND	GND	0V
4	STBY	Standby control	No use
5	VCMP	Output Voltage control	0V - 10V -> Output 0V - 2000V
6	DI	Output Current monitor	$DI(V) = 6V - 1300 \cdot \left( \frac{V_{out}}{60 \cdot 10^6} + I_{out} \right)$

2) CN2: Output connector - SM02B-BHSS-1 (JST)

**Table 4.2 CN2 Pin assign**

Pin	Symbol	Function	Remarks
1	HV	Output	Output Voltage 0V - 2000V
2	NC	Non connection	

#### 5 Test circuit



A1: Ammeter; V3 and V4: Volt meter; F: Frequency counter Agilent 34401A  
 B1, V1: Power supply and Volt meter for Main power. Agilent 6633B  
 B2, V2: Power supply and Volt meter for VCMP ADVANTEST R6240A  
 Oscilloscope: Measure the ripple Tektronix TDS3014B  
 ANT: Antenna for detects the frequency.  
 R1: Load resistor. R2: 10kohm for detects the lout.  
 C1: 2.2nF/20kV for detects the ripple.

**Fig. 5.1 Test circuit**



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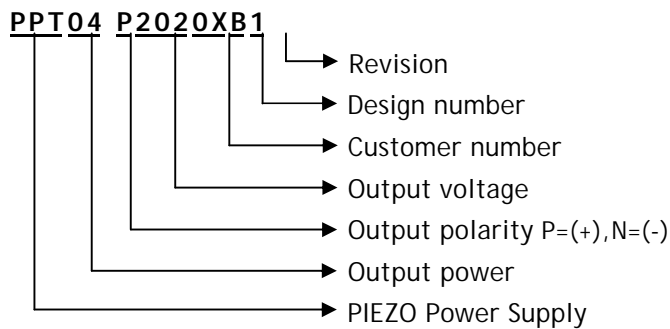
**6 Environment / reliability**

- 1) Operation temperature: 0°C to +55°C
- 2) Operation humidity: 10% RH - 90% RH (No dew-condensation)
- 3) Storage temperature: -10°C to +75°C
- 4) Storage humidity: 5% RH - 95% RH (No dew-condensation)
- 5) Vibration: Frequency: 5Hz > 55Hz > 5Hz, sweep time: 1 minute  
Amplitude: 1.5mmp-p XYZ each direction / 2 hours
- 6) Shock: Acceleration 50G / 6ms  
XYZ each direction 3 times, Total 18 times

**7 Attention**

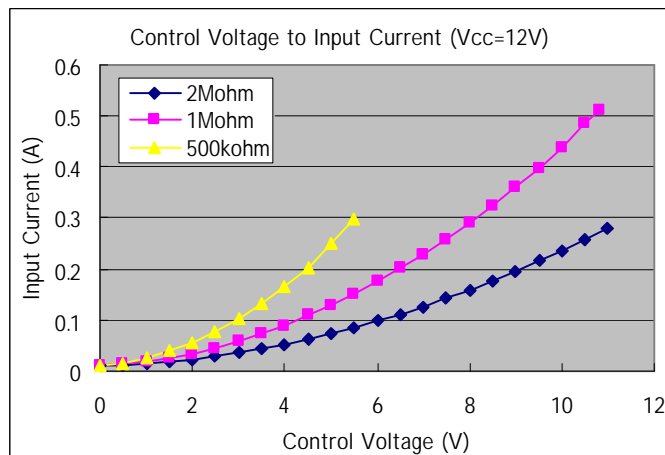
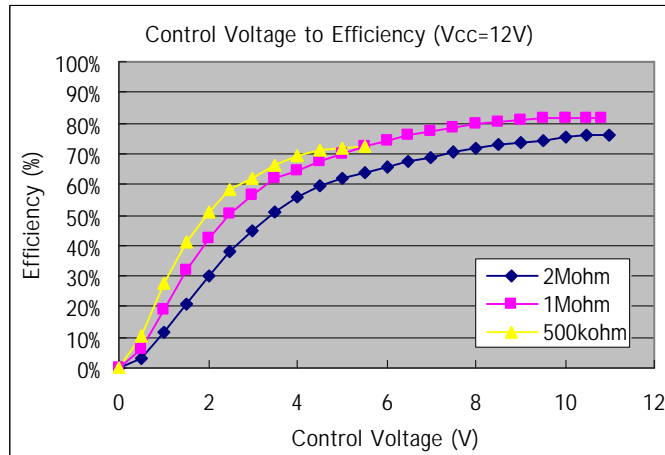
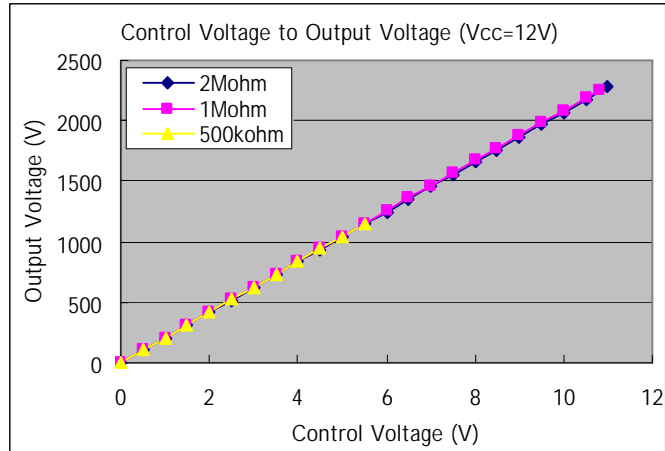
- 1) High Voltage: High voltage occurs in the output of the PZT power supply. Disconnect the inverter from the power supply during the work.
- 2) Storage and transport
  - a. Avoid placing the unit under dusty environments or under gas corrosive atmospheres.
  - b. Preferably, temperature and humidity conditions should be about 5°C to 35°C and 45-75% RH. Avoid environments having very high temperature (> 55°C), high humidity (>90% RH) and a rapid change in temperature.
  - c. Keep the product in a packing material during the delivery. The product should not gain a load (weight) when you take it from the package or when you pile it up.
- 3) Handling
  - a. Please do not bend this product in your assembly process.
  - b. Please do not use the product after you drop it accidentally because it might get unusual vibrations or shocks when it is dropped.
  - c. Please do not strongly push the transformer of the product in your process.

**8 About NCC product number.**



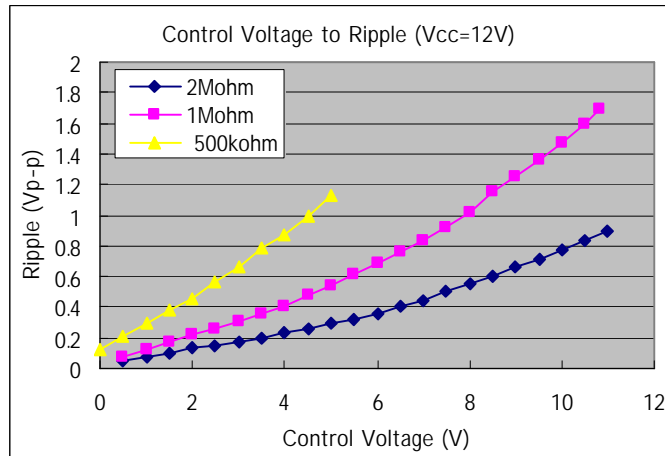


9 Control Voltage Response ( $V_{cc}=12V$ )

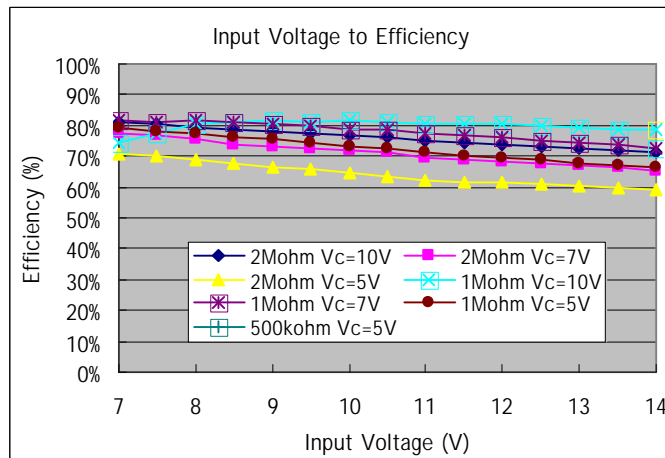
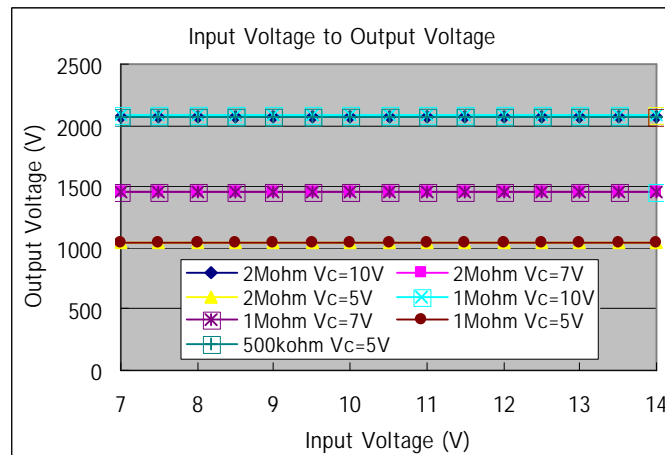




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### 10 Input Voltage Regulation Response





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