

# SPECIFICATION FOR APPROVAL

Product	PIEZO BUZZER ELEMENT
Part No.	SEB-50D10R (RoHS)
Customer Approval	

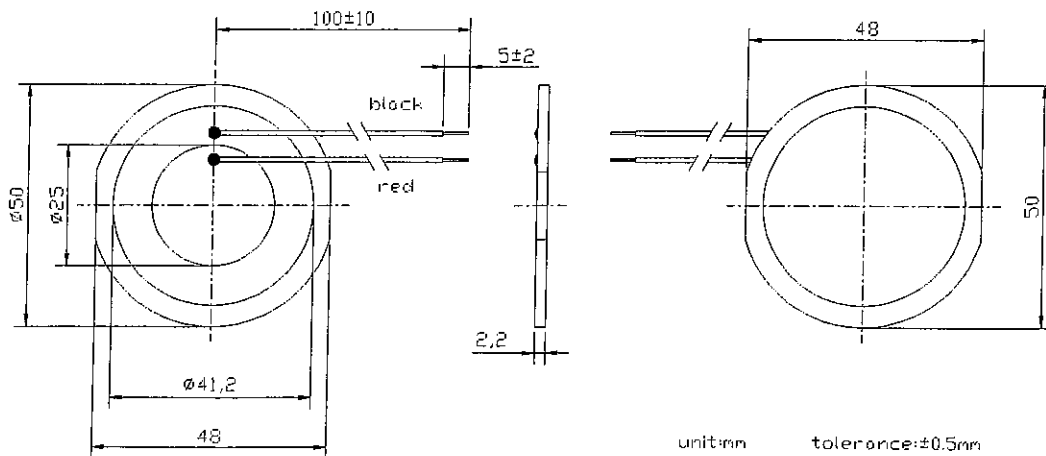
Approved By	Checked By	Made By
ERIC WANG OCT-18-2006	DAVID LIU OCT-18-2006	JOHN HSU OCT-18-2006



**SHOGYO INTERNATIONAL CORP.**  
6851 JERICHO TURNPIKE, SYOSSET, N.Y. 11791  
TEL: (516) 921-9111 • FAX: (516) 921-3777  
[www.shogyo.com](http://www.shogyo.com)

## SEB-50D10R (RoHS)

ITEM		CONDITION
01	Type.	External -drive type sound element
02	Resonant Frequency (KHz)	$1.2 \pm 0.2$ at $25 \pm 2^{\circ}\text{C}$ , 45~60% RH
03	Frequency Range (Hz)	500~20000
04	Min Sound Output at 1.2KHz	70dB at 10cm/12Vp-p Square Wave
03	Resonant Impedance (OHM)	3500 OHM Max. at $25 \pm 2^{\circ}\text{C}$ , 45~60% RH
04	Capacity (nF)	$65 \pm 30\%$ at 120Hz
05	Plate Material	Brass
06	Lead Wire Spec.	Awg30, UL1571 or 7/ 0.1
07	Operating Temperature ( $^{\circ}\text{C}$ )	-20 ~ +60
08	Storage Temperature ( $^{\circ}\text{C}$ )	-30 ~ +70
09	Weight	3.0g



**SHOGYO INTERNATIONAL CORP.**  
 6851 JERICHO TURNPIKE, SYOSSET, N.Y. 11791  
 TEL: (516) 921-9111 • FAX: (516) 921-3777  
[www.shogyo.com](http://www.shogyo.com)

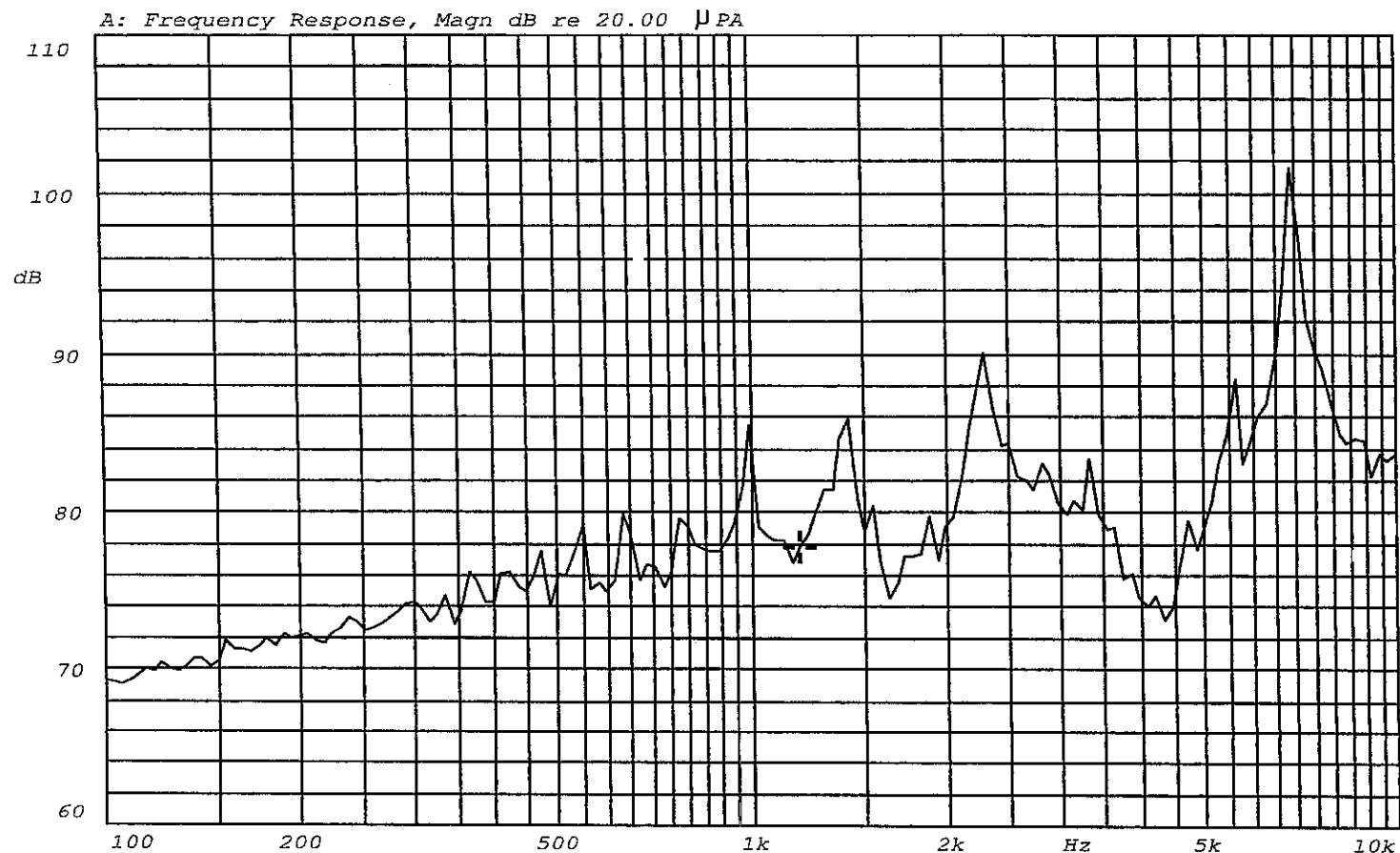
X:1.1885kHz

Y:77.81dB

ZA:Live Curve

SSR T. RMS

**SEB-50D10R(RoHS)**



Mode: SSR



# SHOGYO

**SHOGYO INTERNATIONAL CORP.**  
6851 JERICHO TURNPIKE, SYOSSET, N.Y. 11791  
TEL: (516) 921-9111 • FAX: (516) 921-3777  
[www.shogyo.com](http://www.shogyo.com)

**■ Piezo Ceramic Test Fixture**

1. Resonant Freq. → YHP – 4192A at 1 Vrms (sweep frequency : 1KHz)
2. Resonant Imp. → YHP – 4192A at 1 Vrms (sweep frequency : 1KHz)
3. Capacitance → YHP – 4192A at 1 KHz

**■ Piezo Ceramic Reliability Test**

No.	Item	Condition	Variance after Conditioning
01	High temperature	$+70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 240 hrs	Resonant freq.: Initial value $\pm 10\%$
02	Low temperature	$-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 240 hrs	
03	Humidity	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 90~95%RH , 240 hrs	
04	Thermal shock	$-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (30min) $\rightarrow 20^{\circ}\text{C}$ (15min) $\rightarrow 70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (30min) $\rightarrow 20^{\circ}\text{C}$ (15min) 20 cycles	Capacitance: Initial value $\pm 15\%$
05	Temp. dependence	On place $-20 \sim +70^{\circ}\text{C}$ rel. $20^{\circ}\text{C}$	Resonant freq.: $\pm 15\%$ Capacitance: $0.8\% / ^{\circ}\text{C}$

Test specimens shall be kept for 4 hrs. ( $25^{\circ}\text{C}$ ) before measurement.

