

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Description: magnetic buzzer** 

Date: 9/20/2006

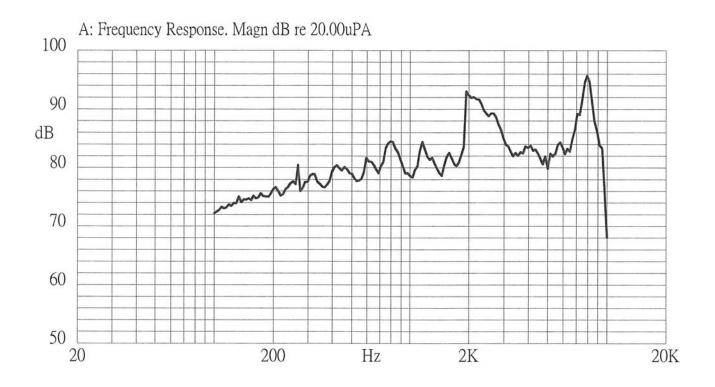
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**Specifications** 

Rated voltage	3.0 Vo-p	Vo-p
Operating voltage	2.0 ~ 4.0 Vo-p	<u></u>
Mean current	90 mA max.	Applying rated voltage, 2000 Hz
		square wave, ½ duty
Coil resistance	15.0 ±2.0 Ω	
Sound output	Min. 85 (Typical 90) dBA	Distance at 5cm (A-weight free air).
		Applying rated voltage of 2000 Hz, square
		wave, ½ duty.
Rated frequency	2,000 Hz	
Operating tempurature	-30 ~ +70° C	
Storage tempurature	-40 ~ +85° C	
Dimensions	ø12.0 x H3.8 mm	See attached drawing
Weight	1.0 g	
Material	PPO (Black)	
Terminal	Pin type (Au Plating)	See attached drawing
RoHS	yes	

## **Frequency Response Curve**





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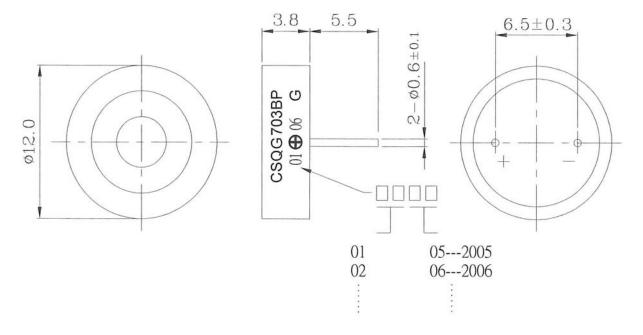
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Unit: mm

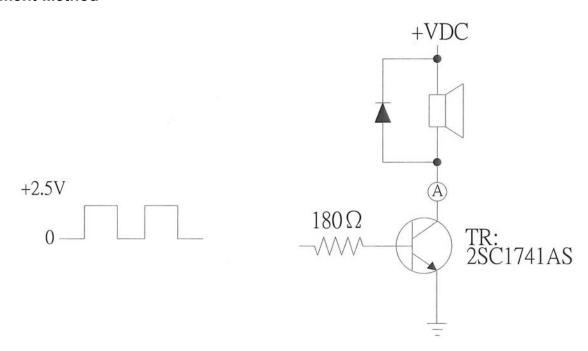
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### **Appearance Drawing**

Tolerance: ±0.5



#### **Measurement Method**





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#### **Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability <sup>1</sup>	Lead terminals are immersed in rosin for	90% min. lead terminals must
	5 seconds and then immersed in a solder bath	be covered with fresh solder.
	of +270 ±5°C for 3 ±1 seconds.	(Except the edge of the terminal.)
Soldering Heat Resistance	Lead terminals are immersed up to 1.5mm from	
	buzzer's body in solder bath of 270 ±5°C for	No in interference in operation.
	3 ±1 seconds.	
Terminal Mechanical Strength	Lead pads shall be soldered onto the pc	
	board and the force of 9.8 N (1.0 kg) shall	No damage or cutting off.
	be applied behind the part for 10 seconds.	
Vibration	The buzzer will be measured after applying	
	a vibration amplitude of 1.5 mm with 10 to	After the test, the part shall meet
	55 Hz band of vibration frequency to each of	specifications without any
	the 3 perpendicular directions for 2 hours.	damage to the appearance and
Drop Test	The part is to be dropped from a height of	the SPL should be within ±10
	75 cm onto a 40 mm thick wooden board 3	dBA of the initial SPL.
	times in 3 axis (X, Y, Z) for a total of 9 drops.	

Notes: 1. Not recommended for wave soldering

## **Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	The part will be subjected to +85°C for 96 hours.	
Low temp. test	The part will be subjected to -40°C for 96 hours	
Thermal shock	The part will be subjected to 10 cycles. One cycle will consist of:	
	+85°C -40°C 30 min. 30 min. 60 min.	The buzzer will be measured after being placed at +25°C for 4 hours. There should be no degredation to the appearance or performance. The SPL should
Temp./Humidity cycle	The part should be subjected to 10 cycles. On cycle will last for 24 hours and consist of:  +85°C  -25°C  -24hours  -24hours	<b></b>



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**Reliability Test** 

Item	Test Condition	<b>Evaluation Standard</b>
Operating (Life Test)	1. Continuous life test:	
	The part will be subjected to 72 hours at +55°C	After the test, the part shall meet
	with 3.0 V, 2000 Hz applied.	specifications without any damage to the appearance or
	2. Intermittent life test:	performance. After 4 hours at
	A duty cycle of 1 minute on, 1 minute off, a	+25°C, the SPL should be within
	minimum of 10,000 times at room temp	±10 dBA of the initial SPL.
	(+25±10°C) with 3.0 V, 2000 Hz applied.	

#### **Test Conditions**

iest conditions			
Standard Test Condition	a) Tempurature: +5 ~ +35°C	b) Humidity: 45 - 85%	c) Pressure: 860 - 1060 mbar
Judgement Test Condition	a) Tempurature: +25±2°C	b) Humidity: 60 - 70%	c) Pressure: 860 - 1060 mbar

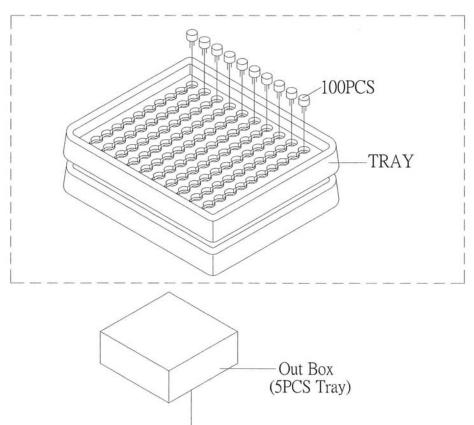


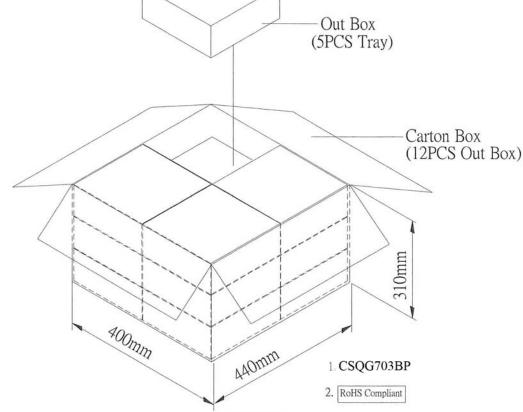
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## **Packaging**





Tray	184mmx184mmx23mm	1x100PCS=100PCS
Out Box	200mmx190mmx100mm	5LAYERx100PCS=500PCS
Carton Box	440mmx400mmx310mm	500PCSx12=6000PCS