



# PRODUCT INFORMATION

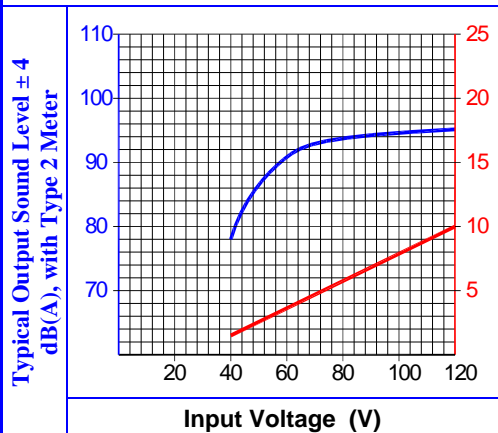
	<b>PN</b>	<b>CE-BR-3</b>	<b>Revision: 1-2013</b>
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## Piezo Electronic Telephone Ringer

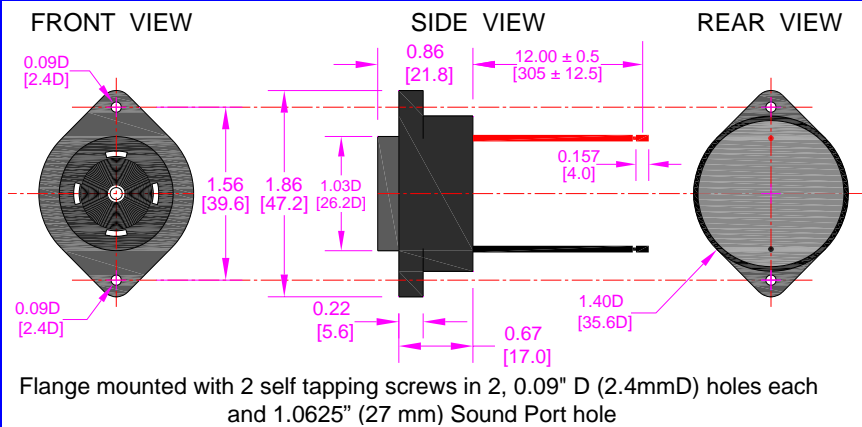
DESCRIPTION		FEATURES			
<b>Challenge Electronics Piezoelectric Electronic Telephone Ringer, Medium Loud WARBLE, High-Pitch Tone; 40 to 93 Vac 20 to 60 Hz. (with external 0.47 MFD capacitor); 95 dB(A) at maximum Voltage and 61 cm, High Pitch with a center frequency of 3,200 Hz.; K style plastic case Panel Mounted with 2 screws; terminated with two Wire Leads, 12" Long, 24 AWG</b>		<ul style="list-style-type: none"> <li>♦ <b>Reliable Solid State Piezoelectric Technology</b></li> <li>♦ <b>Corrosion resistant Stainless Steel Diaphragm</b></li> <li>♦ <b>Flame Retardant Plastic</b></li> <li>♦ <b>Hermetically Sealed Alarm</b></li> <li>♦ <b>Water Proof, NEMA 3R, 4X, or 12</b></li> <li>♦ <b>RoHS, Lead Free Compliance</b></li> <li>♦ <b>ISO 9001 Certified</b></li> </ul>			
SPECIFICATIONS					
<b>Operating Mode</b>	Medium Loud, Fast Warble, High Pitch Tone	<b>Warble Rate</b>	10 ± 10% Cycles per Second		
<b>Operating Voltage</b>	40 to 90 Vac 20 to 60 Hz. (with External 0.47 MFD capacitor)	<b>Nominal Operating Voltage</b>	90 Vac, 20 Hz. (with External 0.47 MFD capacitor)		
<b>Operating Frequency</b>	Center Frequency 3,200 ± 200 Hz. High and Low frequencies approximately ± 200 Hz. from Center Frequency				
<b>Sound Pressure Level</b>	<b>At Minimum Voltage</b>	83 ± 5 dB(A), at: 40 Vac, 24 inches (61cm), 25°C			
	<b>At Maximum Voltage</b>	95 ± 4 dB (A), at: 90 Vac, 24 inches (61 cm), 25°C			
<b>Maximum Current</b>	<b>At Minimum Voltage</b>	4 mA, at 40 Vac	<b>At Maximum Voltage</b>	10 mA, at 90 Vac	
<b>Ringer Equivalence</b>	Part 68, 1.2B, 0.4A REN	Ringer is not certified, but meets all FCC Part 68 requirements			
<b>Talk Impedance</b>	Minimum 100,000 Ohms	<b>Operating Temperature</b>	-30°C to +65°C	<b>Storage Temperature</b>	-40°C to +100°C
<b>Surge Voltage</b>	20% over maximum Operating Voltage for less than 1 minutes				
<b>Materials</b>	<b>Alarm Case</b>	Plastic, "K" Case, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Black			
	<b>Diaphragm</b>	Stainless Steel 304			
	<b>Encapsulation</b>	Two parts epoxy resin and/or silicone potting, Black			
	<b>Termination</b>	Two (2) Wires Leads, 24 AWG, 12" (305 mm) Long, UL 1571			
<b>Physical Dimensions</b>	<b>Length or Diameter (L /D)</b>	1.00" (25.4 mm) Ø	<b>Mounting Hole Spacing</b>	1.56" (39.6 mm)	<b>Height (H)</b> 1.40" (35.6 mm)
<b>Approximate Weight</b>	34 grams	<b>Compliance</b>	RoHS		
RELIABILITY					
<b>Thermal Operating Temperature Test</b>	96 hours continuous operation at Rated Power, at Maximum Rated Operating Temperature *				
	96 hours continuous operation at Rated Power, at Minimum Rated Operating Temperature *				
<b>Thermal Storage Temperature Test</b>	96 hours storage at Maximum Rated Storage Temperatures *				
	96 hours storage at Minimum Rated Storage Temperatures *				
<b>Thermal Shock Test</b>	5 cycles of Minimum and Maximum Operating Temperature Each cycle shall be set per diagram below and is 3 hours long *				
<b>Humidity Test</b>	120 Hours at +60°C ± 2°C. 90-95 % RH *				
<b>Salt Spray</b>	Withstand exposure to salt spray per ASTM B117 for a period of 120 hours *				
<b>Environmental Exposure</b>	Dust, water, salt, dust-control agents, moisture-control agents, detergents, degreasers, diesel fuel, hydraulic fluid per IP-68 *				
<b>Vibration Test</b>	2 Hours at 1.5 mm with 10 to 55 Hz. of vibration frequency to each of 3 perpendicular direction *				
<b>Drop Test</b>	Dropped naturally from 1 meter height onto the surface of 10 mm wooden board, 2 directions upper and side of the part are applied *				
<b>Termination Strength</b>	Maximum of 15 pounds (6.8 Kg) load pull test				
<b>* Reliability Test Performance</b>	Parts should conform to original performance within ± 3 dB				
<b>Life Test</b>	<b>Intermittent</b>	1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and Nominal Rated Voltage			
	<b>Continuous</b>	250 hours continuous operation at room temperature and Nominal Rated Voltage			
<b>Warranty</b>	For a period of one (1) year from date of shipping under normal operations conditions This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair				



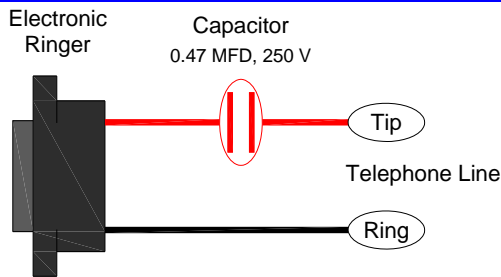
**SPL and CURRENT Vs. INPUT VOLTAGE**



**DIMENSIONS** Units in: Inches / (mm), Tolerance: ± 0.03 / (± 0.7)



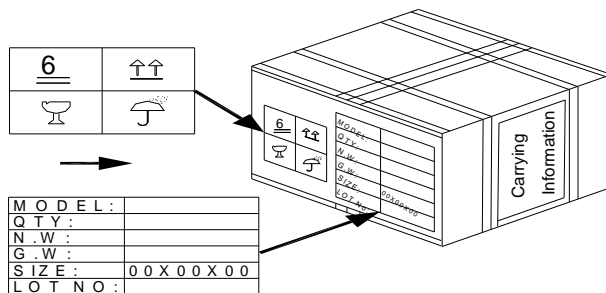
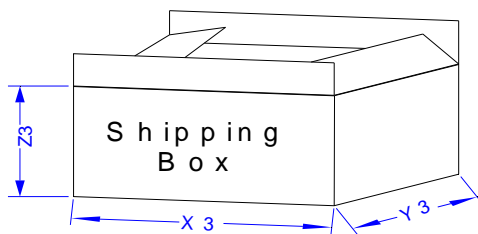
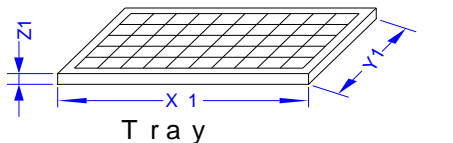
**TELEPHONE RINGER CONNECTION**



**PART 68, RINGER EQUIVALENCE**

1	1.2B, 0.4A REN *
2	Minimum Talk Impedance 100,000 Ohms
3	
4	
*	Ringer is not certified, but meets all FCC Part 68 requirements

**PACKAGING**



Tray		
Dimensions	X1	cm
	Y1	cm
	Z1	cm
Quantity		
SHIPPING BOX		
Dimensions	X2	cm
	Y2	cm
	Z2	cm
Part Number		
Customer PN (if required)		
Number of Trays		
Quantity		
Lot and/or Date Code		
PO Number		
Net Weight		
Gross Weight		
Box Number		
of Number of Boxes		
Country of Origin	<b>Made in China</b>	

Revision	Description	By	Date
1-2013	Modified Specifications Format	ESA	4/30/2013

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