



PRODUCT INFORMATION

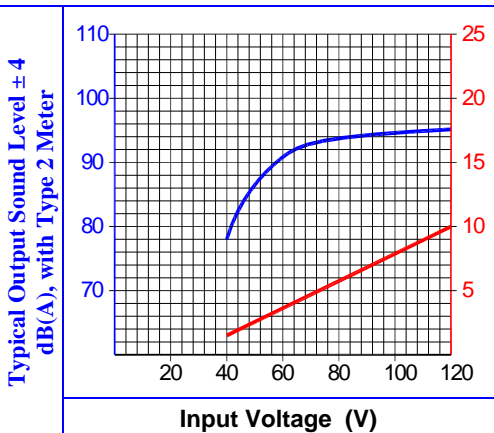
	PN	CE-BR-3-39	Revision: 1-2013
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Piezo Electronic Telephone Ringer

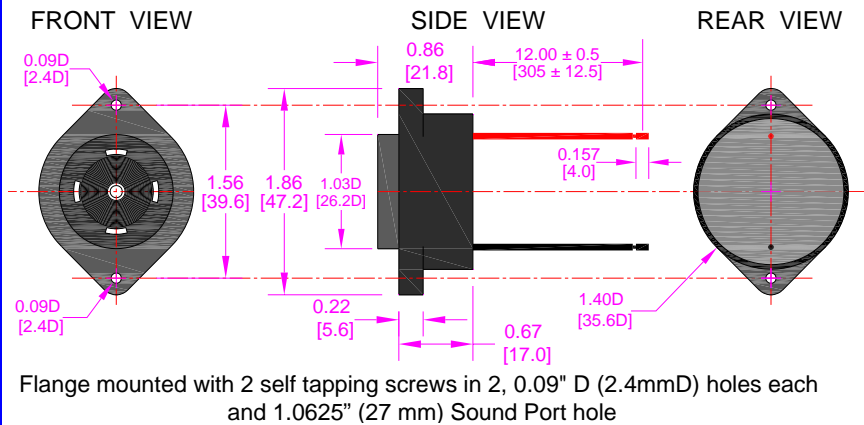
DESCRIPTION		FEATURES			
Challenge Electronics Piezoelectric Electronic Telephone Ringer, Medium Loud WARBLE, Low-Pitch Tone; 40 to 93 Vac 20 to 60 Hz. (with external 0.47 MFD capacitor); 93 dB(A) at maximum Voltage and 61 cm, High Pitch with a center frequency of 2,000 Hz.; K style plastic case Panel Mounted with 2 screws; terminated with two Wire Leads, 12" Long, 24 AWG		<ul style="list-style-type: none"> ◆ Reliable Solid State Piezoelectric Technology ◆ Corrosion resistant Stainless Steel Diaphragm ◆ Flame Retardant Plastic ◆ Hermetically Sealed Alarm ◆ Water Proof, NEMA 3R, 4X, or 12 ◆ RoHS, Lead Free Compliance ◆ ISO 9001 Certified 			
SPECIFICATIONS					
Operating Mode	Medium Loud, Fast Warble, Low Pitch Tone	Warble Rate	10 ± 10% Cycles per Second		
Operating Voltage	40 to 90 Vac 20 to 60 Hz. (with External 0.47 MFD capacitor)	Nominal Operating Voltage	90 Vac, 20 Hz. (with External 0.47 MFD capacitor)		
Operating Frequency	Center Frequency 2,000 ± 200 Hz. High and Low frequencies approximately ± 200 Hz. from Center Frequency				
Sound Pressure Level	At Minimum Voltage	81 ± 5 dB(A), at: 40 Vac, 24 inches (61cm), 25°C			
	At Maximum Voltage	93 ± 4 dB (A), at: 90 Vac, 24 inches (61 cm), 25°C			
Maximum Current	At Minimum Voltage	4 mA, at 40 Vac	At Maximum Voltage	10 mA, at 90 Vac	
Ringer Equivalence	Part 68, 1.2B, 0.4A REN	Ringer is not certified, but meets all FCC Part 68 requirements			
Talk Impedance	Minimum 100,000 Ohms	Operating Temperature	-30°C to +65°C	Storage Temperature	-40°C to +100°C
Surge Voltage	20% over maximum Operating Voltage for less than 1 minutes				
Materials	Alarm Case	Plastic, "K" Case, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Black			
	Diaphragm	Stainless Steel 304			
	Encapsulation	Two parts epoxy resin and/or silicone potting, Black			
	Termination	Two (2) Wires Leads, 24 AWG, 12" (305 mm) Long, UL 1571			
Physical Dimensions	Length or Diameter (L / D)	1.00" (25.4 mm) Ø	Mounting Hole Spacing	1.56" (39.6 mm)	Height (H) 1.40" (35.6 mm)
Approximate Weight	34 grams	Compliance	RoHS		
RELIABILITY					
Thermal Operating Temperature Test	96 hours continuous operation at Rated Power , at Maximum Rated Operating Temperature *				
	96 hours continuous operation at Rated Power , at Minimum Rated Operating Temperature *				
Thermal Storage Temperature Test	96 hours storage at Maximum Rated Storage Temperatures *				
	96 hours storage at Minimum Rated Storage Temperatures *				
Thermal Shock Test	5 cycles of Minimum and Maximum Operating Temperature Each cycle shall be set per diagram below and is 3 hours long *				
Humidity Test	120 Hours at +60°C ± 2°C. 90-95 % RH *				
Salt Spray	Withstand exposure to salt spray per ASTM B117 for a period of 120 hours *				
Environmental Exposure	Dust, water, salt, dust-control agents, moisture-control agents, detergents, degreasers, diesel fuel, hydraulic fluid per IP-68 *				
Vibration Test	2 Hours at 1.5 mm with 10 to 55 Hz. of vibration frequency to each of 3 perpendicular direction *				
Drop Test	Dropped naturally from 1 meter height onto the surface of 10 mm wooden board, 2 directions upper and side of the part are applied *				
Termination Strength	Maximum of 15 pounds (6.8 Kg) load pull test				
* Reliability Test Performance	Parts should conform to original performance within ± 3 dB				
Life Test	Intermittent	1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and Nominal Rated Voltage			
	Continuous	250 hours continuous operation at room temperature and Nominal Rated Voltage			
Warranty	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				



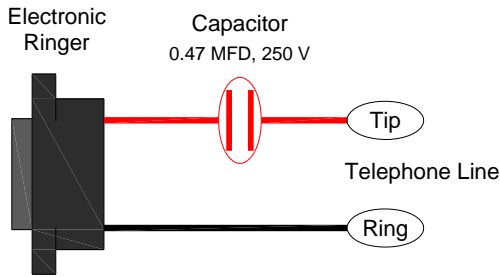
SPL and CURRENT Vs. INPUT VOLTAGE



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



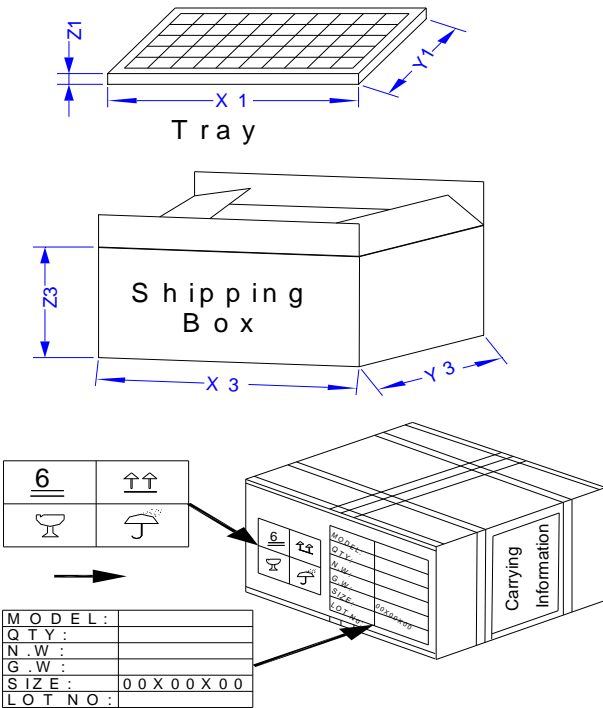
TELEPHONE RINGER CONNECTION



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	Made in China	

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

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