



# PRODUCT INFORMATION

<b>PART #:</b>	<b>CPB23C12-2.9R</b>	<b>Revision: 1-2011</b>
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## PIEZOELECTRIC BUZZER

<b>DESCRIPTION</b>	<b>FEATURES</b>
<b>Challenge Electronics Piezoelectric Buzzer, 23.0 mm Diameter, A style case, 16.0 mm High, 3-20 Vdc, Continuous Tone Medium Loud, 2,900 Hz Resonant Frequency, Typical Sound Pressure Level at 95 dB(A) at 30 cm and Nominal Voltage, PC Pins Termination, 15 mm Pins Spacing, RoHS Compliant</b>	<ul style="list-style-type: none"> <li>● <b>RoHS Compliant</b></li> <li>● <b>ISO 9001 Certified</b></li> </ul>

### SPECIFICATIONS

<b>Alarm Type</b>	<b>Medium Loud, Continuous Tone</b>	<b>Operating Voltage</b>	<b>3 - 20 Vdc</b>	<b>Nominal Voltage</b>	<b>12 Vdc</b>
<b>Resonant Frequency</b>	<b>2,900 ± 500 Hz.</b>	<b>Maximum Operating Current</b>	<b>10 mA at Nominal Voltage</b>		
<b>Sound Pressure Level</b>	<b>Minimum 88 dB(A), Typical 95 dB(A) at: Nominal Voltage, 30 cm, 25°C</b>				
<b>Operating Temperature</b>	<b>-40°C to + 85°C</b>	<b>Storage Temperature</b>	<b>-40 °C to + 90°C</b>		
<b>Material</b>	<b>Housing</b>	<b>Plastic, Noryl PX9406 or equal, Flame Retardant UL 94-VO, Black</b>		<b>Diaphragm</b>	<b>Brass</b>
	<b>Termination</b>	<b>Two PC Pins, 0.8 mm Diameter, Brass, Electro-Tin Plated</b>		<b>Encapsulation</b>	<b>Plastic Plate</b>
<b>Physical Dimensions</b>	<b>Length/ Diameter (L/D)</b>	<b>23.0 mm Ø</b>	<b>Width (W)</b>	<b>Height (H)</b>	<b>16.0 mm</b>
<b>Approximate Weight</b>	<b>3.7 grams</b>	<b>Removable Washing Label</b>	<b>No</b>	<b>Compliance</b>	<b>RoHS</b>
<b>Packaging</b>					

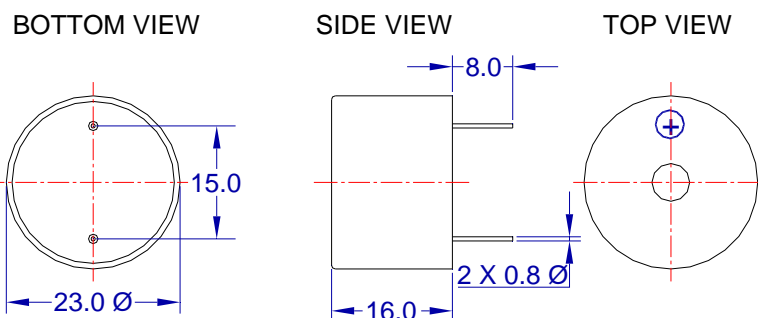
### RELIABILITY

<b>Thermal Operating Cycle Test</b>	240 hours continuous operation, at Nominal Voltage, at Maximum Rated Operating Temperatures *
	240 hours continuous operation, at Nominal Voltage, at Minimum Rated Operating Temperatures *
<b>Thermal Storage Cycle Test</b>	240 hours at Maximum rated Storage Temperatures, NO power applied *
	240 hours at Maximum rated Storage Temperatures, NO power applied *
<b>Thermal Shock Test</b>	<p>Put in Minimum Operating Temperature for 1 hour than move to +20°C for 5 minutes than at Maximum Operating Temperature for 1 hour. Then back to +20°C 5 minutes Repeat for 5 cycles *</p> <div style="text-align: center;"> <p><b>SINGLE CYCLE</b></p> <p>Maximum °C</p> <p>25°C</p> <p>Minutes</p> <p>15 30 45 60 90 120 150 180 210</p> <p>Minimum °C</p> </div>
<b>Humidity Test</b>	120 Hours at +60°C±2°C. 90-95% RH *
<b>Insulation Test</b>	A minimum of 10 MΩ, measured with DC 100V Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case *
<b>Vibration Test</b>	Two (2) Hours at 1.5mm with 10 to 55Hz. of vibration frequency to each of 3 perpendicular directions *
<b>Termination Strength</b>	Maximum of 9.8 N load pull test, applied to each terminal in axial direction for 10 second *
<b>Drop Test</b>	Dropped naturally from 700mm height onto the surface of 10mm wooden board, 2 directions— upper and side of the part are applied *
<b>Solderability</b>	Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds
<b>Soldering Heat Resistance</b>	Terminal leads are immersed, up to 1.5 mm from part case, in rosin for 5 seconds and then immersed in solder-bath of +350±5°C for 3±0.5 seconds or +260±5°C for 10±1 seconds
<b>Reliability Test Performance</b> *	<b>Parts should conform to original performance within ±3dB, after 3 hours of recovery period</b>
<b>Life Test</b>	Two hundred fifty (250) hours of continuous operation, at Nominal Voltage, each at Minimum & Maximum Rated Operating Temperatures
	One thousand (1,000) hours of: 1 minute ON 4 minutes OFF cycle, at Room Temperature, and Maximum Rated Voltage
<b>Warranty</b>	For a period of one (1) year from date of manufacture under normal operating conditions

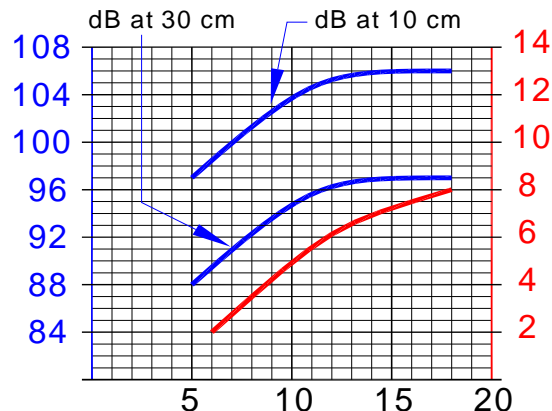
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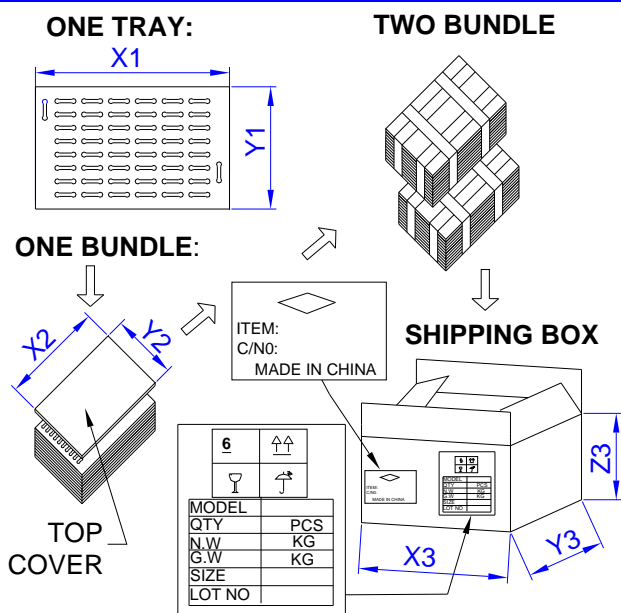
**DIMENSIONS** Units in: mm Tolerance: ± 0.5 mm



**SPL and Current vs. Input Voltage Response**



**PACKAGING**



MARKING		TRAY			
Bundle	Dimensions	X1	cm		
Customer PN		Y1	cm		
Other PN if required		Z1	cm		
Quantity	Quantity				
Lot and/or Date Code	<b>BUNDLE</b>				
Bundle Number				X2	cm
Shipping Box				Y2	cm
Customer Part Number	Z2	cm			
Other PN (if required)	Quantity				
Quantity	<b>SHIPPING BOX</b>				
Lot and/or Date Code	Dimensions	X3	cm		
PO Number		Y3	cm		
Net Weight		Z3	cm		
Gross Weighjt	Number of Bundles				
Box Number	Quantity				
of Number of Boxes	Approximate Weight				
<b>Made in China</b>					