

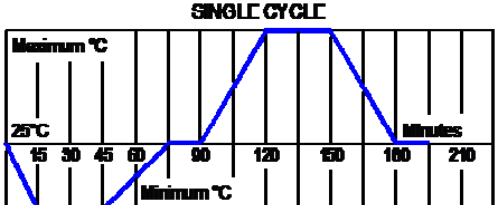




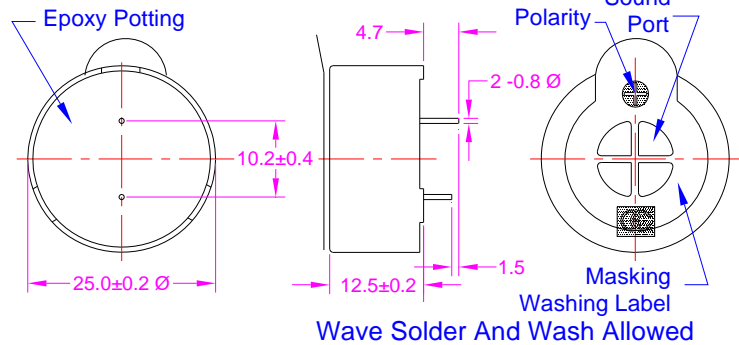
# PRODUCT INFORMATION

<b>Abbreviated PN</b>		<b>CEMT250B30-5-95PLR</b>				<b>Revision: 0-2012</b>		
<b>PART #</b>		<b>CEMT250B125-30-307-5-95P102LR</b>						
		<h2>Electro-Magnetic Sound Transducer</h2>						
<b>DESCRIPTION</b>				<b>FEATURES</b>				
<p><b>Challenge Electronics Electro-Magnetic Transducer, 25.0 mm Diameter, B type (Top Sound Port, with PCB Standoffs) case, 12.5 mm High, 30 Ohms Coil Impedance, 3 to 7 Vo-p Operating Voltage, 5 Vo-p Rated Voltage, Minimum SPL of 95 dB(A) at: Rated Voltage &amp; 10 cm, 950 Hz. Resonant Frequency, PC Pins 10.2 mm spacing Termination, washing Label, RoHS Lead Free Compliance</b></p>				<ul style="list-style-type: none"> <li>● <b>Washable</b></li> <li>● <b>RoHS, Lead Free Compliant</b></li> <li>● <b>ISO 9001</b></li> </ul>				
<b>SPECIFICATIONS</b>								
<b>Operating Voltage</b>	<b>3.0 – 7.0 Vo-p</b>	<b>Rated Voltage</b>	<b>5 Vo-p</b>	<b>Resonant Frequency</b>	<b>950 Hz.</b>	<b>Coil Resistance</b>	<b>30 ± 4 Ohms</b>	
<b>Sound Pressure Level</b>	<b>Minimum 95 dB(A) Typical 100 dB(A), at: Rated Voltage, 10 cm, Resonant Frequency, Square Wave, 50% Duty Cycle</b>							
<b>Operating Current</b>	<b>Maximum 80 mA, at: Rated Voltage, Resonant Frequency, Square Wave, 50% Duty Cycle</b>							
<b>Operating Temperature</b>	<b>-40°C to + 85°C</b>	<b>Storage Temperature</b>	<b>-40°C to +85°C</b>					
<b>Material</b>	<b>Case</b>	<b>B Style, Plastic, Noryl™ or equal, Black</b>				<b>Sound Port</b>	<b>Top</b>	
	<b>Encapsulation</b>	<b>Epoxy Potting</b>						
	<b>Termination</b>	<b>PC Pins, 0.8 mm Diameter, Copper, Sn plated, Positive Pin 4.7 mm Long, Negative Pin 3.2 mm Long</b>						
<b>Physical Dimensions</b>	<b>Length or Diameter (L /D)</b>	<b>25.0 mm Ø</b>	<b>Width (W)</b>		<b>Height (H)</b>	<b>12.5 mm</b>	<b>Pins Spacing</b> <b>10.2 mm</b>	
<b>Approximate Weight</b>	<b>10 grams</b>	<b>Removable Washing Label</b>	<b>Yes</b>	<b>Compliance</b>	<b>Lead Free, RoHS</b>			
<b>Options</b>								
<b>RELIABILITY</b>								
<b>Thermal Operating Temperature Test</b>	<b>96 hours</b> continuous operation at <b>Rated Voltage</b> , at <b>Maximum Rated Operating Temperature</b> *							
	<b>96 hours</b> continuous operation at <b>Rated Voltage</b> , at <b>Minimum Rated Operating Temperature</b> *							
<b>Thermal Storage Temperature Test</b>	<b>96 hours</b> storage at <b>Maximum Rated Storage Temperatures</b> *							
	<b>96 hours</b> storage at <b>Minimum Rated Storage Temperatures</b> *							
<b>Thermal Shock Test</b>	<p><b>5 cycles</b> of Minimum and <b>Maximum Operating Temperature</b> Each cycle shall be set per diagram below and is three (3) hours long *</p>							
<b>Humidity Test</b>	<b>120 Hours</b> at +40°C±2°C. 90-95% RH *							
<b>Insulation Test</b>	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case							
<b>Vibration Test</b>	<b>2 Hours</b> of at0.75 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions *							
<b>Termination Strength</b>	Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for <b>10 seconds</b>							
<b>Drop Test</b>	Dropped naturally from 750 mm height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (9 times total) *							
<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>Operation Life Test</b>	<b>Continuous</b>	<b>240 hours</b> of continuous operation, at Rated Voltage, each at Minimum & Maximum Rated Operating Temperatures						
	<b>Intermittent</b>	<b>1,000 hours</b> of: 1 minute <b>ON</b> 4 minutes <b>OFF</b> cycle, at Room Temperature, and 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							

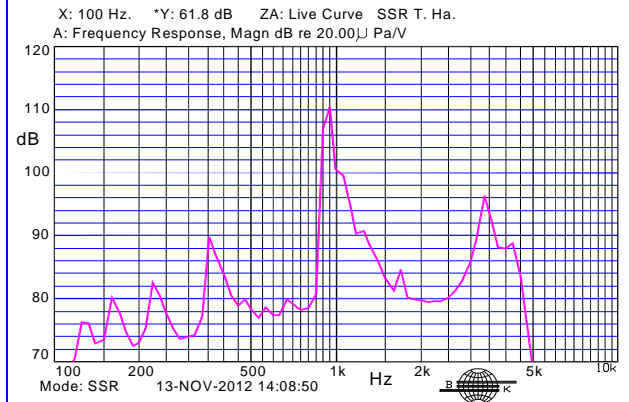


### DIMENSIONS

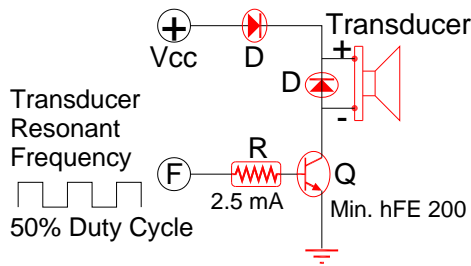
Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise



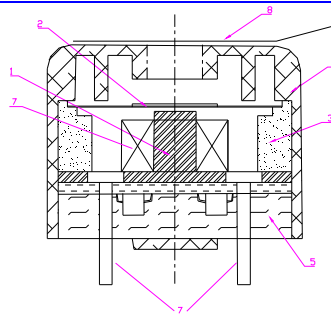
### SPL vs. FREQUENCY RESPONSE



### RECOMMENDED CIRCUIT DRIVE

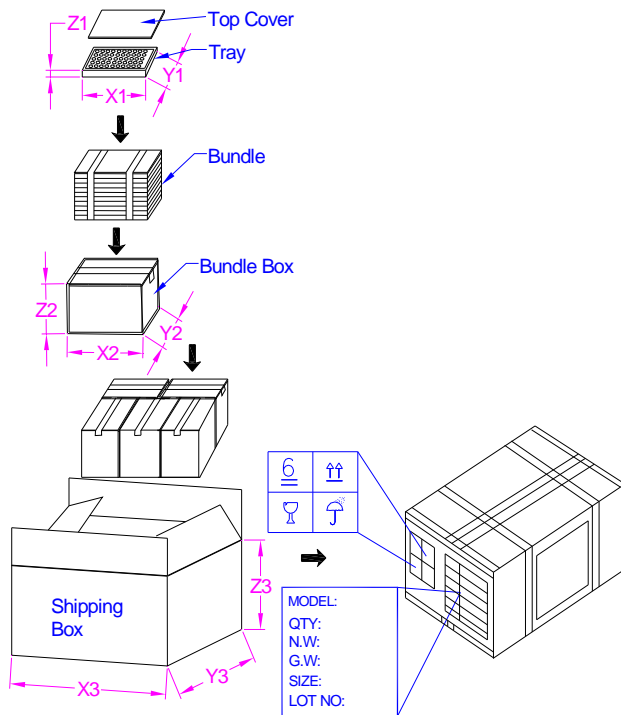


### CROSS SECTIONAL DIAGRAM



Item #	Description	Qty	Notes
1	Coil Part	1	Copper And Iron
2	Diaphragm	1	Iron
3	Core	1	Ferrite
4	Housing	1	Noryl™, Black
5	Potting		Epoxy
6	Magnet Wire		
7	PC Pins	2	Copper, Sn plated
8	Masking label	1	Paper

### PACKAGING



MARKING		TRAY	
<b>Bundle</b>		<b>X1</b>	<b>32 cm</b>
Customer PN	Dimensions	<b>Y1</b>	<b>17 cm</b>
Other PN (if required)		<b>Z1</b>	<b>2.7 cm</b>
Quantity	Quantity	<b>50</b>	
Lot and/or Date Code	<b>BUNDLE</b>		
Bundle Number		<b>X2</b>	<b>32 cm</b>
<b>Shipping Box</b>	Dimensions	<b>Y2</b>	<b>17 cm</b>
Customer Part Number		<b>Z2</b>	<b>32 cm</b>
Other PN (if required)	Quantity	<b>2 Ea.</b>	<b>700</b>
		<b>1 Ea.</b>	<b>600</b>
Quantity	<b>SHIPPING BOX</b>		
Lot and/or Date Code		<b>X3</b>	<b>51.5 cm</b>
PO Number	Dimensions	<b>Y3</b>	<b>33 cm</b>
Net Weight		<b>Z3</b>	<b>33.5 cm</b>
Gross Weight	Number of Bundles	<b>3</b>	
Box Number	Quantity	<b>2,000</b>	
of Number of Boxes	Approximate Weight		
<b>Made in China</b>			

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.