




# PRODUCT INFORMATION

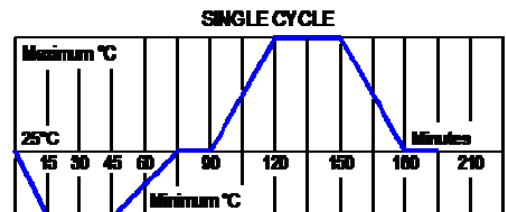
<b>PART #</b>	<b>CEMT250B-5PLR</b> <b>CEMT250B125-5C15PLR</b>	<b>Revision: 1-2012</b>
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## Electro-Magnetic Sound Transducer

<b>DESCRIPTION</b> Challenge Electronics Electro-Magnetic Transducer, 25.0 mm Diameter, B type case (TOP Sound Port with PCB standoffs), 12.5 mm High, 30 Ohms Coil Impedance, 3 to 7 Vop operation, minimum SPL of 85 dB(A) at: Rated Voltage, 10 cm, 1,500 Hz. resonant Frequency, PC Pins 10.2 mm spacing Termination, washing Label, RoHS Lead Free Compliance	<b>FEATURES</b> <ul style="list-style-type: none"> <li>• High Sound Pressure Level</li> <li>• Washable</li> <li>• RoHS, Lead Free Compliant</li> <li>• ISO 9001</li> </ul>	
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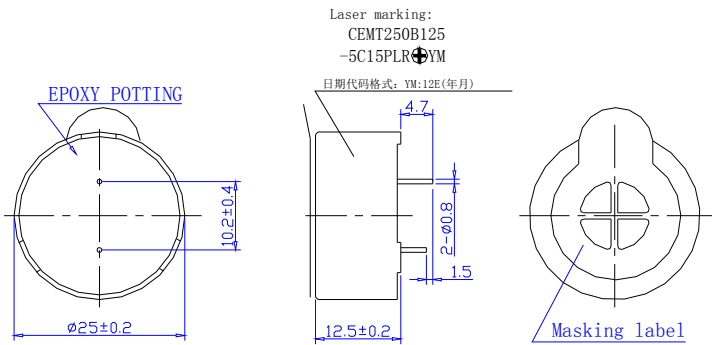
<b>SPECIFICATIONS</b>									
Operating Voltage	3.0 – 7.0 Vop	Rated Voltage	5.0 Vop	Resonant Frequency	1,500 ± 15 Hz.	Coil Resistance	30 ± 4 Ohms		
Sound Pressure Level	Typical 110 dB(A), Min. 104 dB(A), at: Rated Voltage, 10 cm, Resonant Frequency, Square Wave, 50% Duty Cycle								
Operating Current	80 mA, at: Rated Voltage, Resonant Frequency, Square Wave, 50% Duty Cycle								
Operating Temperature	-40°C to + 85°C		Storage Temperature	-40°C to +85°C					
Material	Case	B Style, Plastic, Noryl or equal, Black, Black				Sound Port	Top		
	Encapsulation	Epoxy Potting							
	Termination	PC Pins, 0.8 mm Diameter, Brass, Sn plated, Positive Pin 5.0 mm Long, Negative Pin 3.5 mm Long							
Physical Dimensions	Length or Diameter (L /D)	25.0 mm ø	Width (W)	Height (H)	12.5 mm	Pins Spacing	10.2 mm		
Approximate Weight	10 grams	Removable Washing Label	Yes	Compliance	Lead Free, RoHS				

<b>RELIABILITY</b>	
Thermal Operating Temperature Test	96 hours continuous operation at <b>Rated Voltage</b> , at <b>Maximum Rated Operating Temperature</b> * 96 hours continuous operation at <b>Rated Voltage</b> , at <b>Minimum Rated Operating Temperature</b> *
Thermal Storage Temperature Test	96 hours storage at <b>Maximum Rated Storage Temperatures</b> * 96 hours storage at <b>Minimum Rated Storage Temperatures</b> *
Thermal Shock Test	5 cycles of Minimum and <b>Maximum Operating Temperature</b> Each cycle shall be set per diagram below and is three (3) hours long *
	
Humidity Test	120 Hours at +40°C±2°C. 90-95% RH *
Insulation Test	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case
Vibration Test	2 Hours of at 0.75 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions *
Termination Strength	Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds
Drop Test	Dropped naturally from 750 mm height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (6 times total) *
Solderability	Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds
Soldering Heat Resistance	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
* Reliability Test Performance	<b>Parts should conform to original performance within ±3dB, after 3 hours of recovery period</b>
Operation Life Test	<b>Continuous</b> 240 hours of continuous operation, at Rated Voltage, each at Minimum & Maximum Rated Operating Temperatures
	<b>Intermittent</b> One thousand (1,000) hours of: 1 minute <b>ON</b> 4 minutes <b>OFF</b> cycle, at Room Temperature, and 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

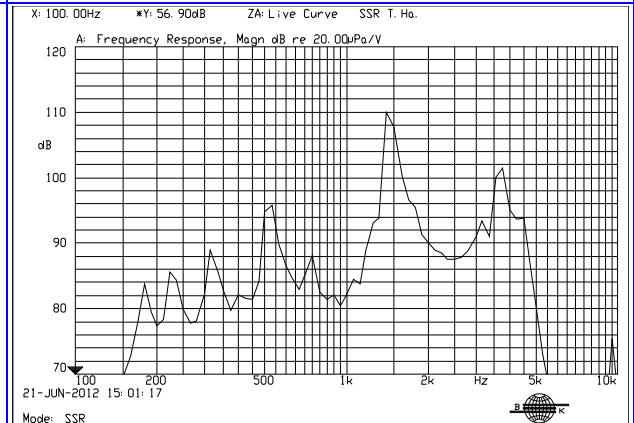


**DIMENSIONS**

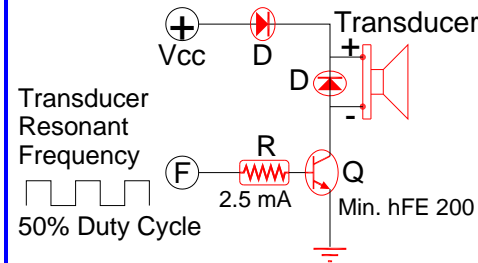
Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise.



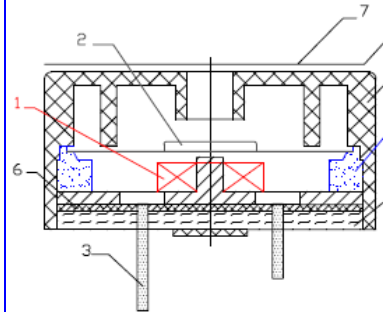
**SPL vs. FREQUENCY RESPONSE**



**RECOMMENDED CIRCUIT DRIVE**

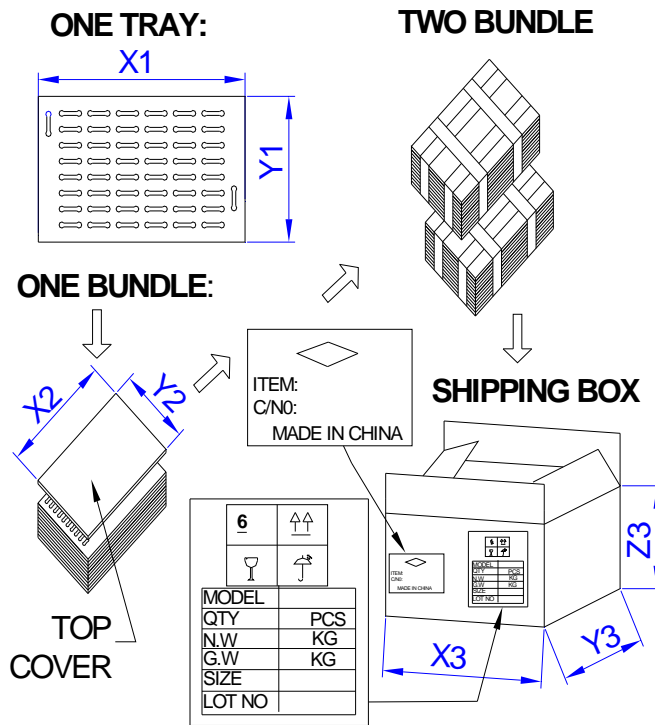


**CROSS SECTIONAL DIAGRAM**



Item #	Description	Qty	Notes
1	Coil	1	
2	Diaphragm	1	
3	PC Pins	2	Copper, Sn plated.
4	Housing	1	Noryl Black
5	Magnet	1	
6	PCB	1	
7	Removable Sealing Label	1	
8	Epoxy	1	

**PACKAGING**



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

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