




PRODUCT INFORMATION

PART #	CEET120B090-47-205-20P65LR	Revision: 0-2013
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Electro-Magnetic Sound Transducer

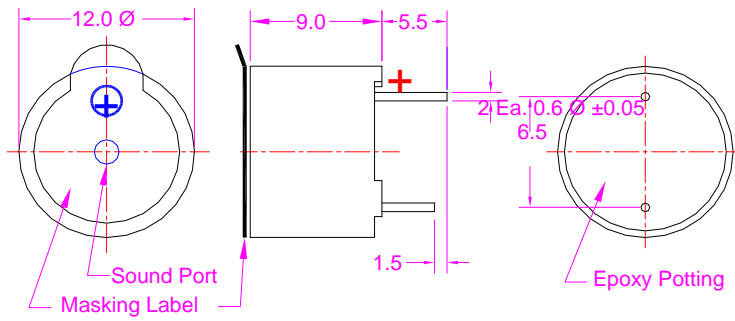
DESCRIPTION	FEATURES	
Challenge Electronics Electro-Magnetic Transducer; 12.0 mm Diameter; B type case (Round, With Standoffs, Top Sound Port); 9.0 mm High; 47 Ohms Coil Impedance; 2 to 5 Vo-p Operating Voltage; Minimum SPL 80 dB(A) at: Rated Voltage & 10 cm, 2,000 Hz. Resonant Frequency; PC Pins 6.5 mm spacing Termination, Washing Label; RoHS Lead Free Compliance	<ul style="list-style-type: none"> ● Washable ● RoHS, Lead Free Compliant ● ISO 9001 	

SPECIFICATIONS								
Operating Voltage	2.0 – 5.0 Vo-p	Rated Voltage	3.0 Vo-p	Resonant Frequency	2,000 Hz.	Coil Resistance	47 ± 7 Ohms	
Sound Pressure Level	Minimum 80 dB(A), Typ. at: Rated Voltage, 10 cm, Resonant Frequency, Square Wave, 50% Duty Cycle							
Operating Current	40 mA, at: Rated Voltage, Resonant Frequency, Square Wave, 50% Duty Cycle							
Operating Temperature	-30°C to +70°C		Storage Temperature	-40°C to +85°C				
Material	Case	B Style, Plastic, Noryl or equal, Black			Sound Port	Top		
	Encapsulation	Epoxy Potting						
	Termination	PC Pins, 0.6 mm Diameter, Copper, Sn plated, Positive Pin 5.5 mm Long, Negative Pin 4.0 mm Long						
Physical Dimensions	Length or Diameter (L / D)	12.0 mm Ø	Width (W)		Height (H)	9.0 mm	Pins Spacing	6.5 mm
Approximate Weight	2 grams	Removable Washing Label	Yes	Compliance	Lead Free, RoHS			
Options								

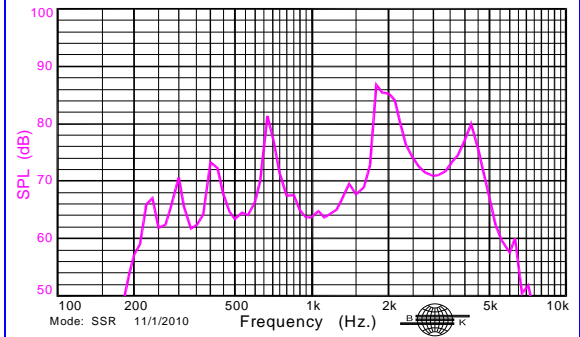
RELIABILITY		
Thermal Operating Temperature Test	96 hours continuous operation at Rated Voltage, at Maximum Rated Operating Temperature *	
	96 hours continuous operation at Rated Voltage, at Minimum Rated Operating Temperature *	
Thermal Storage Temperature Test	96 hours storage at Maximum Rated Storage Temperatures *	
	96 hours storage at Minimum Rated Storage Temperatures *	
Thermal Shock Test	<p>5 cycles of Minimum and Maximum Operating Temperature</p> <p>Each cycle shall be set per diagram below and is three (3) hours long *</p> <div data-bbox="1047 1113 1550 1323" data-label="Figure"> </div>	
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 (9 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	Parts should conform to original performance within ±3dB, after 3 hours of recovery period	
Operation Life Test	Continuous	240 hours of continuous operation, at Rated Voltage, each at Minimum & Maximum Rated Operating Temperatures
	Intermittent	1,000 hours of: 1 minute ON 4 minutes OFF 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	



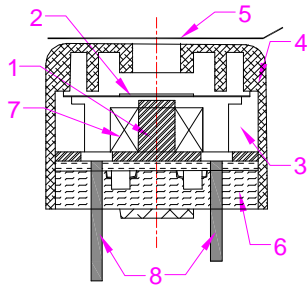
DIMENSIONS Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise



SPL vs. FREQUENCY RESPONSE

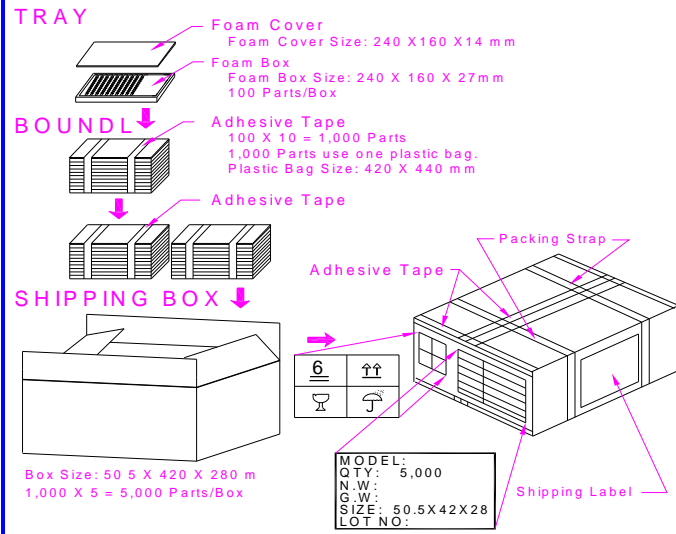


Cross Sectional Diagram:



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

PACKAGING



MARKING		TRAY		
Bundle		X1	24 cm	
Part Number	Dimensions	Y1	16 cm	
Other PN (if required)		Z1	2.7 cm	
Quantity		Quantity		100
Lot and/or Date Code	BUNDLE			
Bundle Number	Dimensions	X2	44 cm	
Shipping Box		Y2	42 cm	
Part Number		Z2	27 cm	
Other PN (if required)	Quantity	Quantity		1,000
Quantity	SHIPPING BOX			
Lot and/or Date Code	Dimensions	X3	50.5 cm	
PO Number		Y3	42 cm	
Net Weight		Z3	28 cm	
Gross Weight	Number of Bundles	Quantity		5
Box Number of Boxes	Quantity	Quantity		5,000
Made in China	Approximate Weight	Quantity		11 Kg

Revision	Description	By	Date