




PRODUCT INFORMATION

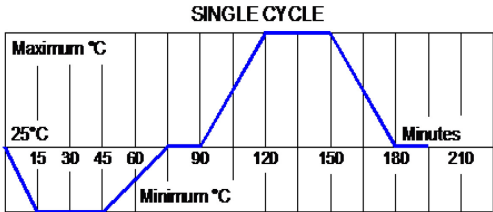
PART #	CEET12A090-16-205-24P6.5LR	Revision: 1-2013
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Electro-Magnetic Sound Transducer

DESCRIPTION	FEATURES	
Challenge Electronics Electro-Magnetic Transducer, 12 mm Diameter, A type case (TOP Sound Port with PCB standoffs), 9 mm High, 16 Ohms Coil Impedance, 2 to 5 Vpp operation, minimum SPL of 85 dB(A) at: Rated Voltage, 10 cm, 2,400 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 Vpp	Rated Voltage	3.0 Vpp	Resonant Frequency	2,400 ± 24 Hz.				
Sound Pressure Level	85 dB(A), at: Rated Voltage, Resonant Frequency, Square Wave, 50% Duty Cycle 10 cm								
Operating Current	60 mA, at: Rated Voltage, Resonant Frequency, Square Wave, 50% Duty Cycle								
Coil Resistance	16 ± 4 Ohms	Operating Temperature	-20°C to + 70°C	Storage Temperature	-30°C to +80°C				
Material	Case	A Style, Plastic, Noryl, Black							
	Encapsulation	PCB							
	Termination	PC Pins, 0.6 mm Diameter, Brass, Sn plated							
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	RoHS, Lead Free				

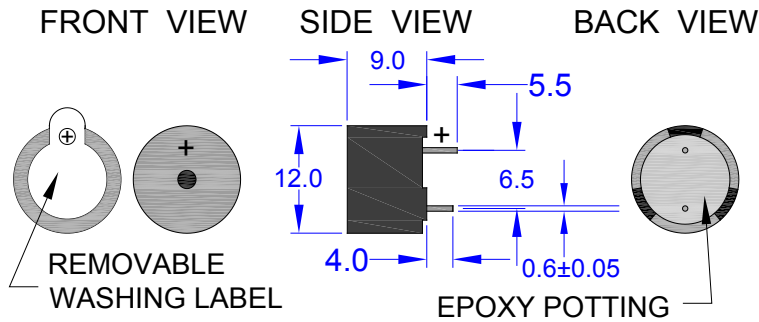
RELIABILITY		
Thermal Operating Temperature Test	240 hours continuous operation at Rated Voltage, at Maximum Rated Operating Temperature * 240 hours continuous operation at Rated Voltage, at Minimum Rated Operating Temperature *	
Thermal Storage Temperature Test	96 hours storage at Maximum Rated Storage Temperatures * 96 hours storage at Minimum Rated Storage Temperatures *	
Thermal Shock Test	<p>5 cycles of Minimum and Maximum Operating Temperature Each cycle shall be set per diagram below and is three (3) hours long *</p> <div style="text-align: center;">  <p>SINGLE CYCLE</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>	
Humidity Test	240 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 1.5 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	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	One thousand (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	

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.
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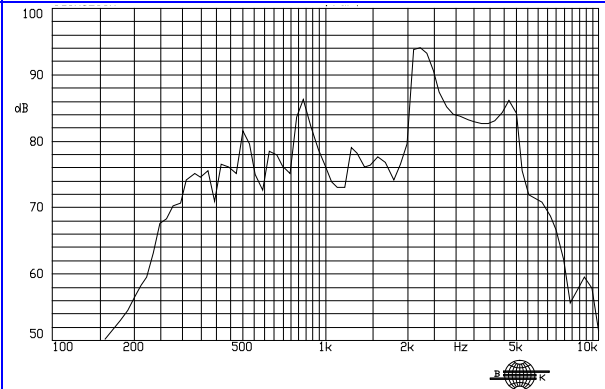


DIMENSIONS

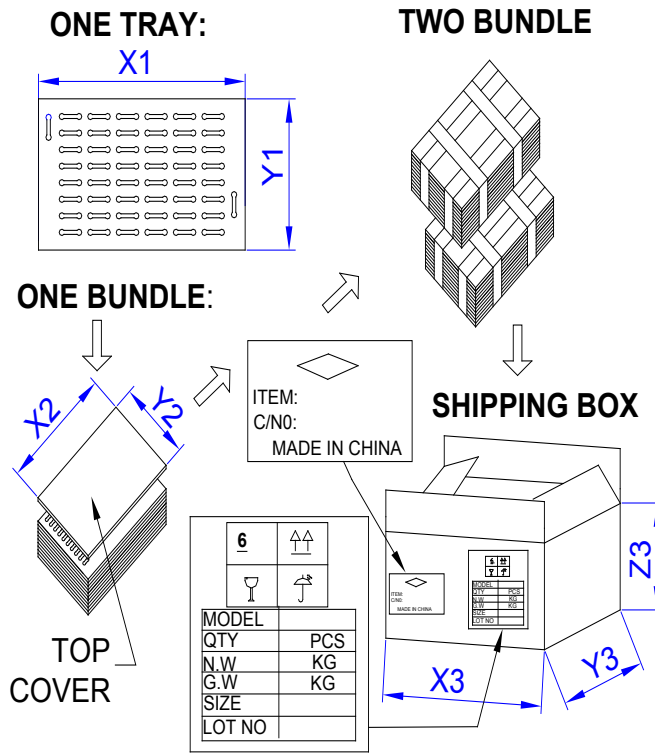
Units in: mm, Tolerance: ± 0.5mm unless specified otherwise.



SPL vs. FREQUENCY RESPONSE



PACKAGING



MARKING		TRAY	
Bundle		X1	24 cm
Customer PN	Dimensions	Y1	16 cm
Other PN (if required)		Z1	2.25 cm
Quantity	Quantity	100	
Lot and/or Date Code	BUNDLE		
Bundle Number		X2	24 cm
Shipping Box	Dimensions	Y2	16 cm
Customer Part Number		Z2	24 cm
Other PN (if required)	Quantity	1,000	
Quantity	SHIPPING BOX		
Lot and/or Date Code		X3	50.5 cm
PO Number	Dimensions	Y3	28 cm
Net Weight		Z3	42 cm
Gross Weighjt	Number of Bundles	5	
Box Number	Quantity	5,000	
of Number of Boxes	Approximate Weight		
Made in China			

Revision	Description	By:	Date
1-2013	Corrected pin spacing in the description from 7.6 to 6.5	W.Sargent	7/1/2013