




PRODUCT INFORMATION

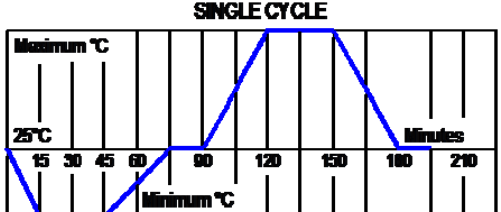
PART #	CEET120B085-50-103-20P65R	Revision: 2-2013
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Electro-Magnetic Sound Transducer

DESCRIPTION	FEATURES	
Challenge Electronics Electro-Magnetic Transducer; 12.0 mm Diameter; B type case (TOP Sound Port with PCB standoffs); 8.5 mm High; 50 Ohms Coil Impedance; 1 to 3 Vo-p operation; minimum SPL of 80 dB(A) at: Rated Voltage, 10 cm; 2,048 Hz. Resonant Frequency; PC Pins 6.5 mm spacing Termination; RoHS Lead Free Compliance	<ul style="list-style-type: none"> • RoHS, Lead Free Compliant • ISO 9001 & TS16949 Certified 	

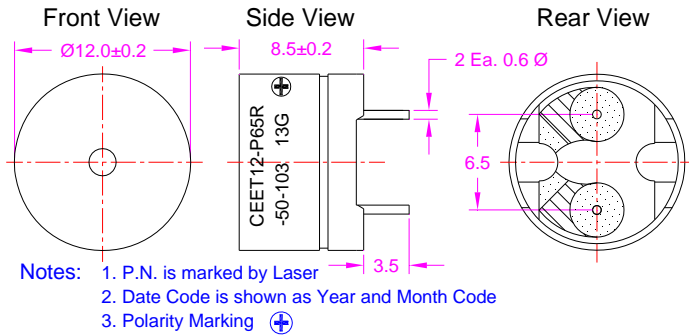
SPECIFICATIONS	
Operating Voltage	1.0 – 3.0 Vo-p
Rated Voltage	1.5 Vo-p
Resonant Frequency (Fo)	2,048 Hz.
Coil Resistance	50 ± 7.5 Ohms
Sound Pressure Level	Min. 80 dB(A), at: Rated Voltage, 10 cm, Resonant Frequency, Square Wave, 50% Duty Cycle
Operating Current	20 mA, at: Rated Voltage, Resonant Frequency, 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
Encapsulation	PCB
Termination	PC Pins, 0.6 mm Diameter, Copper, Sn plated, 3.5 mm Long
Physical Dimensions	Length or Diameter (L /D) 12.0 mm Ø
	Width (W)
	Height (H) 8.5 mm
	Pins Spacing 6.5 mm
Approximate Weight	2 grams
Removable Washing Label	No
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	5 cycles of Minimum and Maximum Operating Temperature 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 (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 ± 3 dB, 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

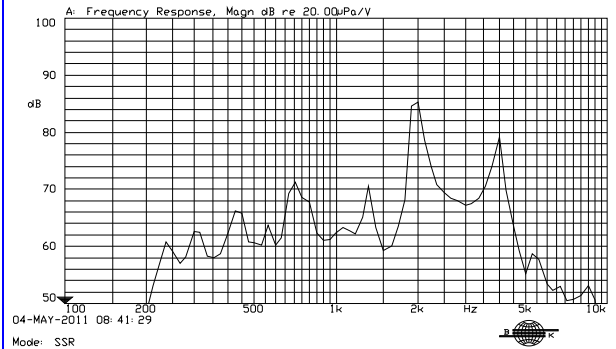


DIMENSIONS

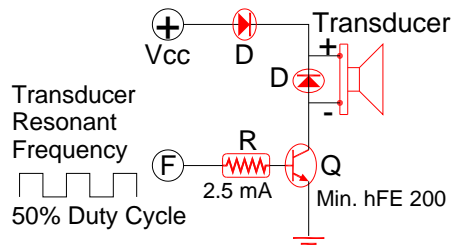
Units in: mm, Tolerance: ± 0.5mm unless specified otherwise



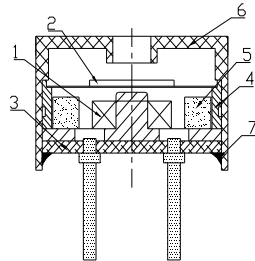
SPL vs. FREQUENCY RESPONSE



RECOMMENDED CIRCUIT DRIVE



CROSS SECTIONAL DIAGRAM



Item #	Description	Qty	Notes
1	Coil Part	1	Copper and Iron
2	Diaphragm	1	Iron
3	PCB	1	
4	Brass Ring	1	Copper
5	Magnet	1	Ferrite
6	Housing	1	NORYL™
7	Potting		Epoxy
8	Pins	2	Plated Copper

SOLDERING & WASHING RECOMMENDATIONS

This product should not be exposed to extremely high temperatures for prolonged time period. Excessive heat will degrade the internal structure of the unit, soldering should be conducted as quickly as possible

Hand soldering
 With ABS, Hi-Temp ABS, FR ABS, or NYLON Plastic Case

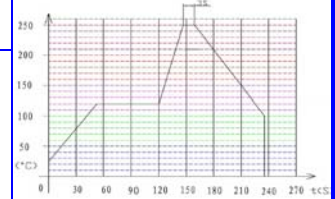
300°C Thermal Iron

Wave soldering
 With NORYL, PBT, or PPS Plastic Case

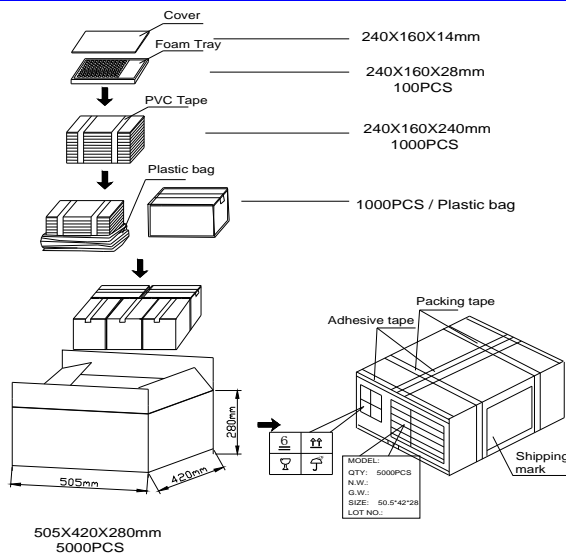
256°C within 3 seconds
350°C within 1 seconds

Washing

Washing is not allowed.
This part is not sealed and may be damaged by wash



PACKAGING



MARKING		TRAY	
Bundle	Dimensions	X1	24 cm
Part Number		Y1	16 cm
Other PN (if required)		Z1	1.4 cm
Quantity	Quantity	100	
Lot and/or Date Code	BUNDLE		
Bundle Number	Dimensions	X2	24 cm
Shipping Box		Y2	16 cm
Part Number		Z2	24 cm
Other PN (if required)	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	5	
Box Number of Boxes	Quantity	5,000	
Made in China	Approximate Weight		

Revision	Description	By	Date
1-2013			6/19/2013
2-2013	Modified PC Pins Length from 5.0 to 3.5 mm and Updated soldering and washing recommendations	Ely Zofan	7/12/2013