

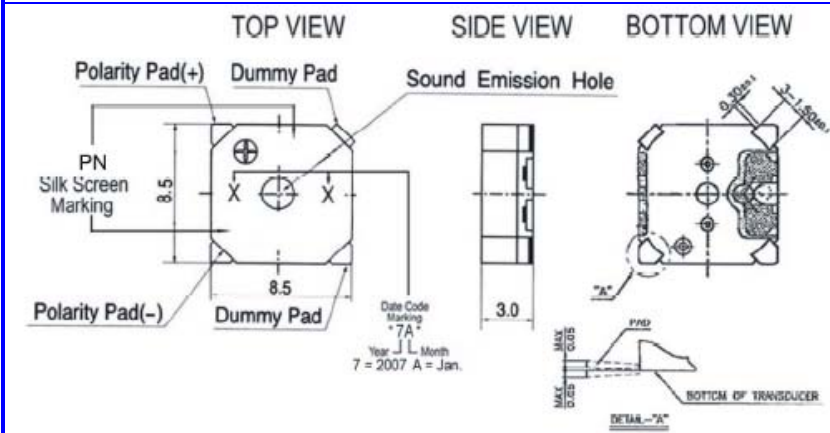


PRODUCT INFORMATION

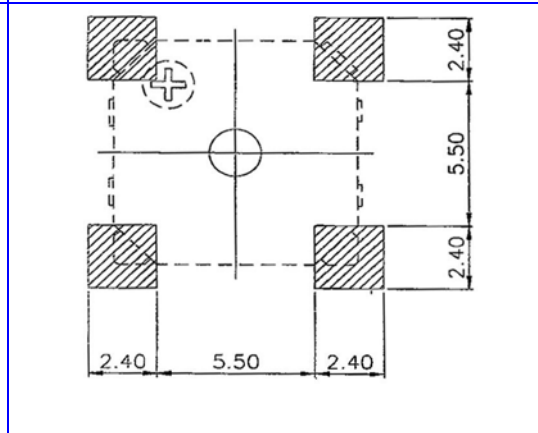
PART #:	CEET085N030-16-205-25MR					Revision: 1-2013	
	SMD Electro-Magnetic Transducer						
DESCRIPTION			FEATURES				
Challenge Electronics Electro-Magnetic Transducer; 8.5 mm Long; N style case (Square, TOP Sound Port); 3.0 mm High; 16±2.4 Ohms Coil Impedance; 2-5 Vo-p Operating Voltage; Minimum Sound Pressure level 88 dB(A) at Nominal Voltage 10 cm; 2,500 Hz. at Resonant Frequency Rated Voltage; SMD Termination; RoHS Lead Free Compliant			<ul style="list-style-type: none"> • RoHS, Lead Free Compliant • ISO 9001 & TS16949 Certified 				
SPECIFICATIONS							
Resonant Frequency (Ro)	2,500 Hz.		Coil Impedance		16 ± 2.4 Ohms		
Operating Voltage	2 – 5 Vo-p		Nominal Rated Voltage		3.6 Vo-p		
Sound Pressure Level	88 dB(A) at: Nominal rated Voltage, 10 cm, Resonant Frequency, 50% Duty Cycle						
Operating Current	90 mA , at: Nominal rated Voltage, Resonant Frequency, 50% Duty Cycle						
Operating Temperature	-30°C to +70°C		Storage Temperature		-40°C to +85°C		
Material	Housing	Plastic, LCP				Color	Black
	Diaphragm	Ni Alloy Disc N50				Sound Port	Top
	Termination	SMD, 3 soldering pads, Tin plated Brass					
Physical Dimensions	Length or Diameter (L/D)	8.5 mm	Width (W)	8.5 mm	Height (H)	3.0 mm	
Approximate Weight	0.4 grams	Removable Washing Label	No	Compliance	RoHS, Lead Free		
Options							
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	5 cycles of Minimum and Maximum Operating Temperature Each cycle shall be set per diagram below and is three (3) hours long *						
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 (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							
Life Test	Intermittent	1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and maximum Rated Voltage					
	Continuous	250 hours continuous operation at maximum Rated Voltage and maximum Operating Temperatures					
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						



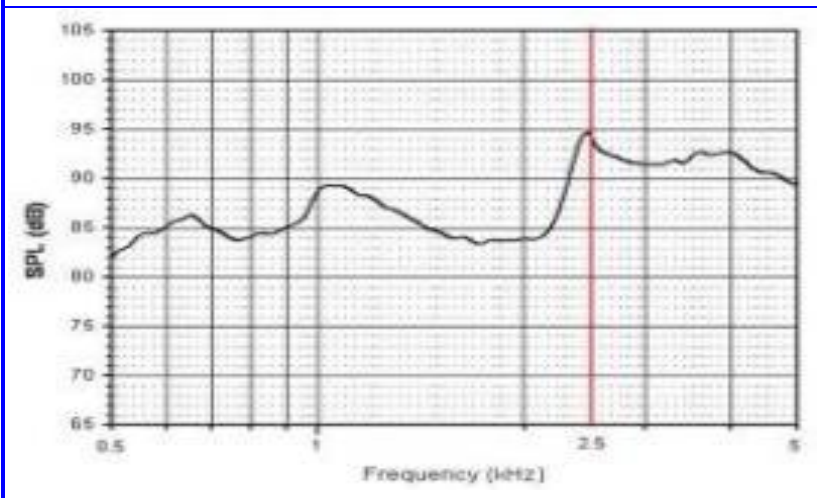
DOMEMSIONS Units in: mm Tolerance: ±0.5mm



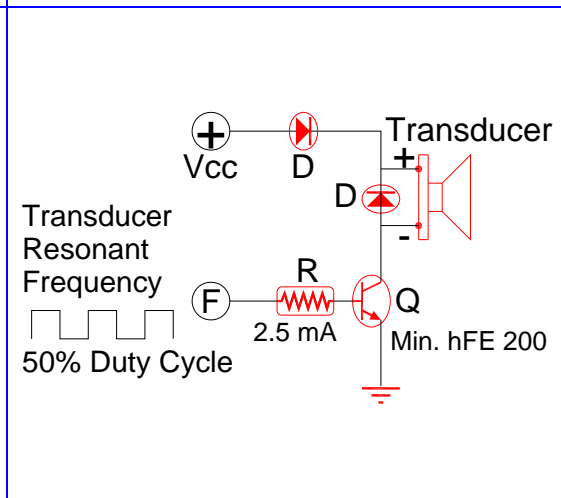
RECOMMENDED LAND PATTERN



FREQUENCY RESPONSE CURVE



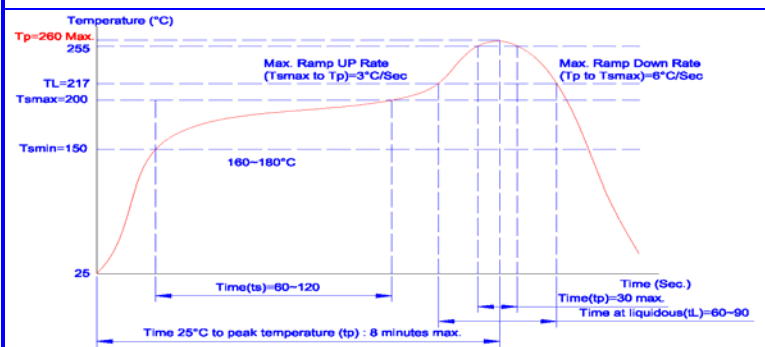
RECOMMENDED CIRCUIT DRIVE



STORAGE

- Shelf life:** Twelve (12) months when devices are to be stored in factory supplied unopened ESD moisture sensitive bag under maximum environmental conditions of 30°C, 70% R.H.
- Exposure:** Devices should not be exposed to high humidity high temperature environment. MSL (moisture sensitivity level) Class 2.

SOLDER REFLOW PROFILE



Stage	Temperature Profile	Maximum Time
Pre-heat	170~230°C	120 sec
Solder Melt	Above 230°C	100 sec
Peak	260°C Maximum	
Cool Down		100 sec
Total Duration Period		6 Minutes Maximum

