



PRODUCT INFORMATION

PART #	CEET085R025-15-204-27MR	Revision: 0-2011
---------------	--------------------------------	-------------------------



SMD Electro-Magnetic Sound Transducer

DESCRIPTION	FEATURES	
Challenge Electronics Electro-Magnetic Transducer, 8.5 mm Square, R type SMD case (Square, Standoffs, Side Sound Port), 2.5 mm Height, 15 Ohms coil resistance, 2 to 4 Vo-p operation 2,731 Hz Resonant Frequency, with a minimum output of 80 dB(A) at 10cm. M type SMD Termination, RoHS Lead Free compliant	<ul style="list-style-type: none"> • RoHS, Lead Free Compliant • ISO 9001 	

SPECIFICATIONS

Resonant Frequency	2,731 ± 10% Hz.	Coil Impedance	15 ± 3 Ohms
Operating Voltage	1.0 - 3.0 Vo-p	Rated Voltage	3.0 Vo-p
Sound Pressure Level	80 dB(A), at: rated Voltage, 10 cm, Resonant Frequency, Square wave, 50% Duty Cycle		
Maximum Current	80 mA, at rated Voltage, Resonant Frequency, Square wave, 50% Duty Cycle		
Operating Temperature	-30°C to + 85°C	Storage Temperature	-40°C to + 90°C
Termination	SMD, M type, 4 soldering pads, Sn plated Brass		
Material	Case	R type SMD, Plastic, LCP VECTRA 130i	
	Diaphragm	Ni Alloy Disc N50	Back Sealed Epoxy
Sound Port Direction	Side	Case Standoffs from PCB	Yes Removable Washing Label No
Physical Dimensions	Length or Diameter (L /D)	8.5 mm	Width (W) 8.5 mm Height (H) 2.5 mm
Approximate Weight	0.6 grams	Compliance	RoHS, Lead Free
Options			

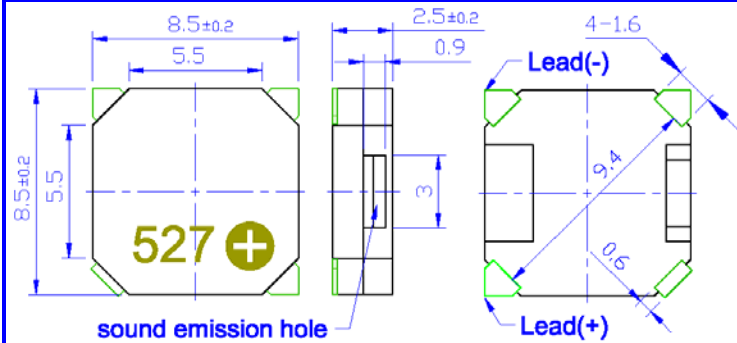
RELIABILITY

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	240 hours storage at Maximum Rated Storage Temperatures *	
	240 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.	
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	

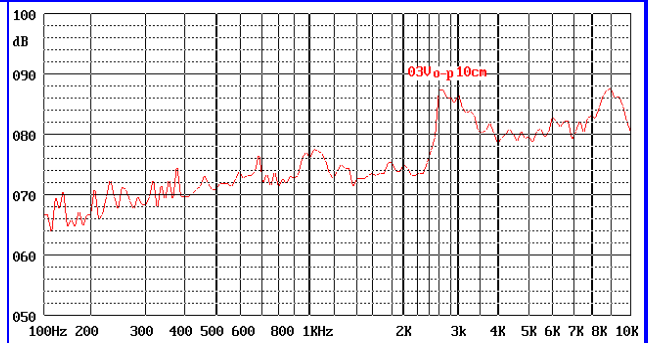


DIMENSIONS

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



SPL vs. FREQUENCY RESPONSE

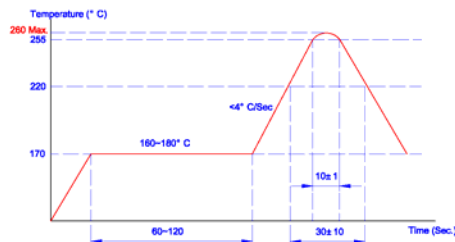


RECOMMENDED LAND PATTERN

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

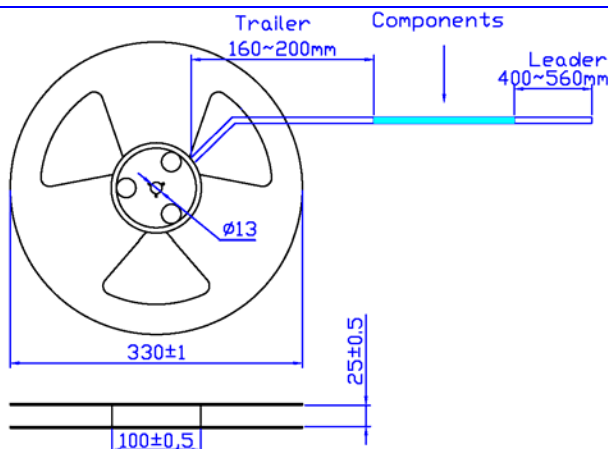
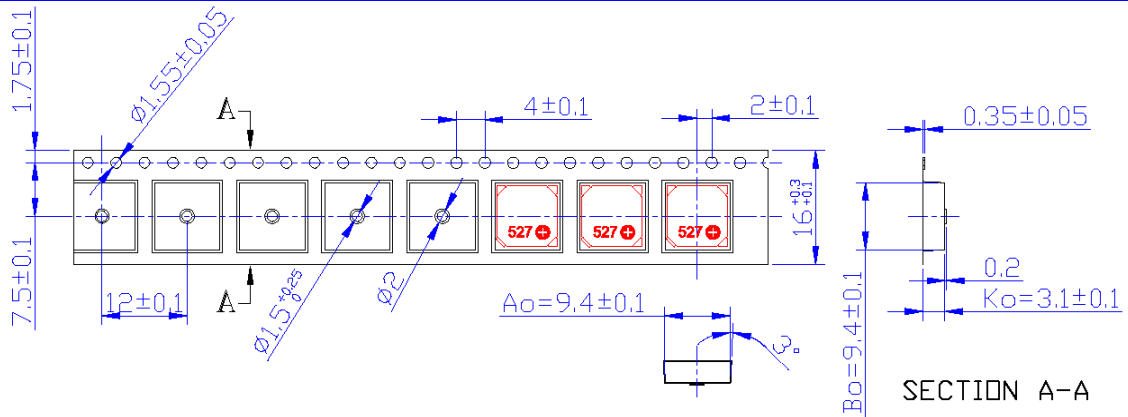
SOLDER REFLOW PROFILE



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

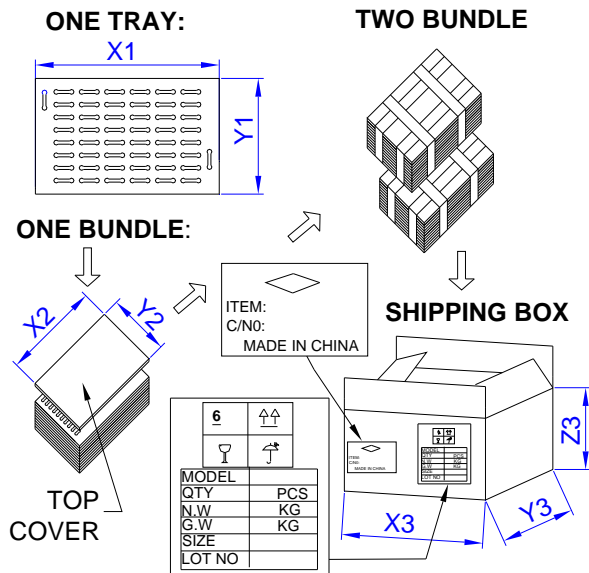


TAPE & REEL DIMENSIONS (Unit: mm)



1. 10 pocket holes pitch cumulative tolerance ± 0.20 mm.
2. Carrier camber is 1 mm in 100 mm.
3. A0 and B0 measured on a plane on a place 0.30 mm above the bottom of the pocket.
4. K0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. All dimensions meet EIA-481-2-A requirements.
6. Reel Size 13"
7. Parts per Reel 1,500 parts

PACKAGING



MARKING

TRAY

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