
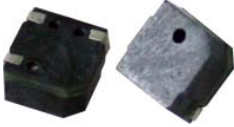
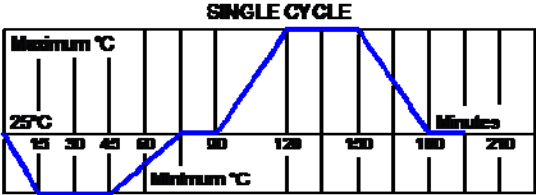




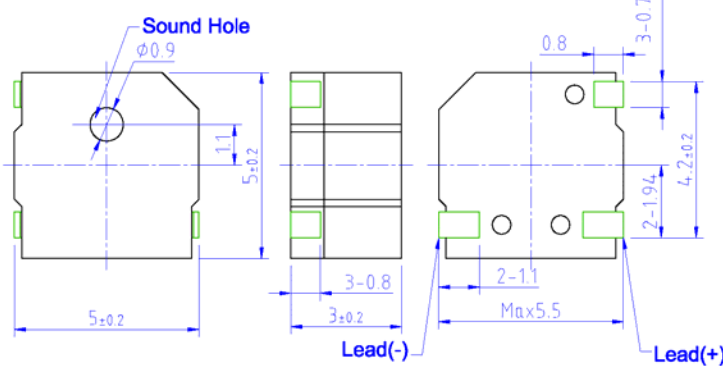
PRODUCT INFORMATION

PART #	CEET050M030-17-204-40MR				Revision: 1-2016	
	SMD Electro-Magnetic Sound Transducer					
DESCRIPTION				FEATURES		
<p>Challenge Electronics Electro-Magnetic Transducer, 5.0 mm Square, M type SMD case (Square, TOP Sound Port), 3.0mm Height, 17 Ohms coil resistance, 2 to 4 Vo-p operation 4,000 Hz Resonant Frequency, with a minimum output of 78 dB(A) at,10cm. M type SMD Termination, RoHS Lead Free compliant</p>				<ul style="list-style-type: none"> • RoHS, Lead Free Compliant • ISO 9001 		
SPECIFICATIONS						
Resonant Frequency	4,000 ± 10% Hz.		Coil Impedance	17 ± 2 Ohms		
Operating Voltage	2.0 - 4.0 Vo-p		Rated Voltage	3.0 Vo-p		
Sound Pressure Level	82 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, 3 soldering pads, Sn plated Brass					
Material	Case	M type SMD, Plastic, LCP VECTRA 130i				
	Diaphragm	Ni Alloy Disc N50		Back Sealed	Epoxy	
Sound Port Direction	Top		Case Standoffs from PCB	No	Removable Washing Label	No
Physical Dimensions	Length or Diameter (L /D)	5.0 mm		Width (W)	5.0 mm	Height (H) 3.0 mm
Approximate Weight	0.5 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					

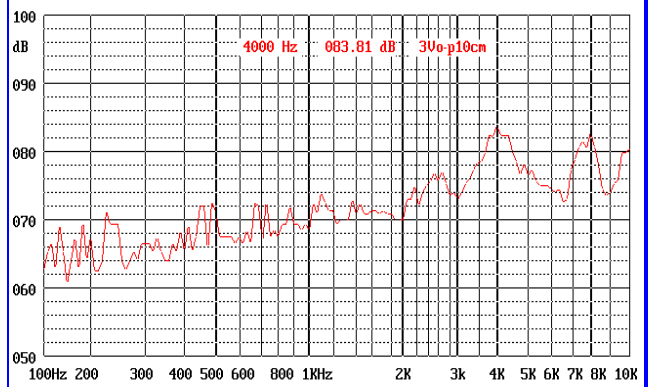


DIMENSIONS

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



SPL vs. FREQUENCY RESPONSE

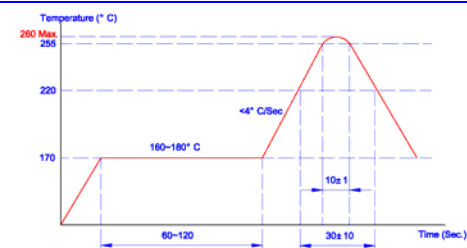


RECOMMENDED LAND PATTERN

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

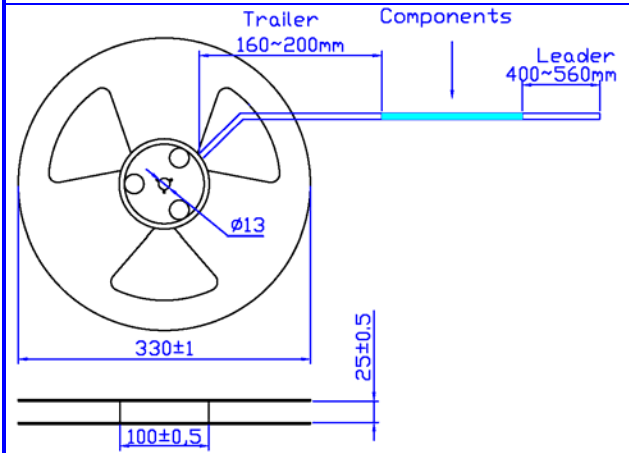
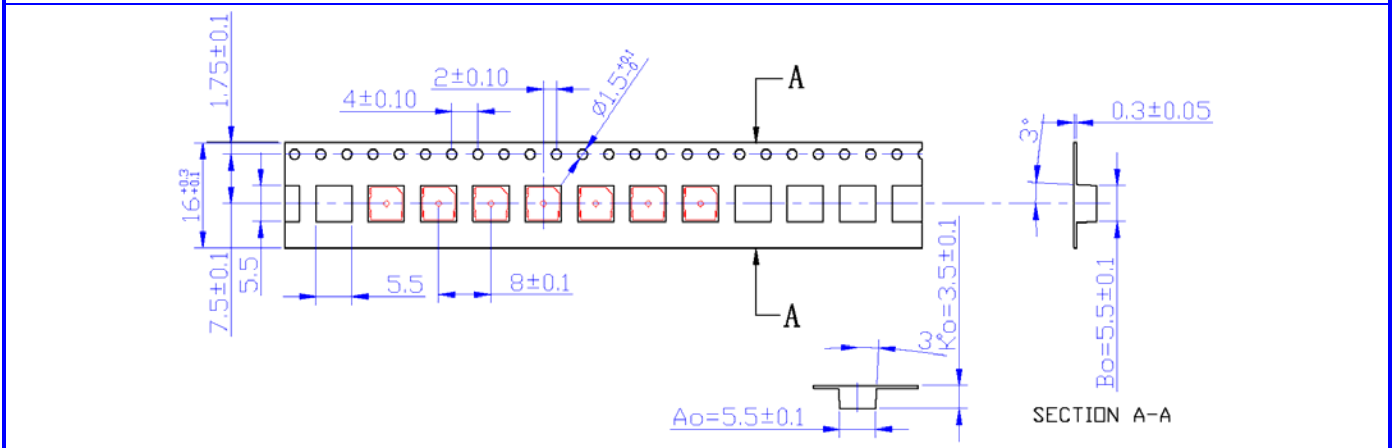


Stage	Temperature Profile	Maximum Time
Pre-heat	170~230°C	120 sec
Solder Melt	Above 230°C	100 sec
Peak	260°C Maximum	
Cool Down		100 sec
Total Duration Period		6 Minutes Maximum

Revision	Description	By	Date
1-2016	Corrected Number of Contacts (termination)	WS	2016-02-10

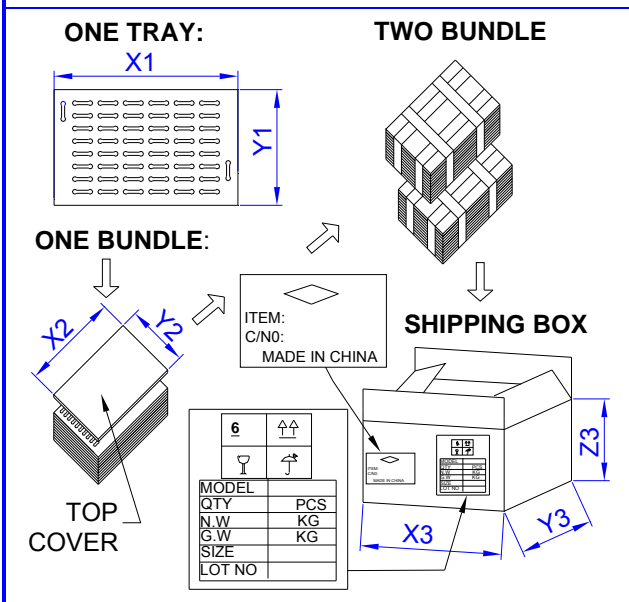


TAPE & REEL DIMENSIONS (Unit: mm)



- 10 pocket holes pitch cumulative tolerance ± 0.20 mm.
- Carrier camber is 1 mm in 100 mm.
- A0 and B0 measured on a plane on a place 0.30 mm above the bottom of the pocket.
- K0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
- All dimensions meet EIA-481-2-A requirements.
- Reel Size 13"
- Parts per Reel 2,000 parts

PACKAGING



MARKING

Bundle

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

TRAY