



PRODUCT INFORMATION

PART # Abbreviated Full	CET085L040-27MHR CET085L040-17-204-27MHR	Revision: 3-2013
And Part Number	CSET8.5L3.6-17-2.7-5F	



SMD Electro-Magnetic Sound Transducer

DESCRIPTION	FEATURES	
Challenge Electronics Electro-Magnetic Transducer, 8.5 mm Long, 8.5 mm Wide, L type SMD case (Square, Side Sound Port), 4.0 mm Height, 17 Ohms coil resistance, 2 to 4 Vop operation 2,710 Hz Resonant Frequency, with a Typical Sound Pressure output of 103 dB(A) at 10 cm Rated Voltage. M type SMD Termination, H Expanded Operating Temperature, RoHS Lead Free compliant	<ul style="list-style-type: none"> ● Flame Retardant Plastic ● RoHS, Lead Free Compliant ● ISO 9001 	

SPECIFICATIONS

Resonant Frequency	2,710 ± 500 Hz.	Coil Impedance	17 ± 3 Ohms			
Operating Voltage	2.0 - 4.0 Vop	Rated Voltage	3.6 Vop			
Minimum SPL	Min. 94 dB(A), Typ. 103 dB(A), at rated Voltage, 10 cm, Resonant Frequency, Square wave, 50% Duty Cycle					
Current	Avg. 100 mA, Max. 200 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			
Material	Case	Plastic, LCP Vectra E130i	Sound Port Direction	Side		
	Diaphragm	Ni Alloy Disc N50 or equal	Termination	SMD, 4 soldering pads, Sn plated Brass		
	Encapsulation	Plastic back				
Physical Dimensions	Length or Diameter (L /D)	8.5 mm	Width (W)	8.5 mm	Height (H)	4.0 mm
Approximate Weight	0.6 grams	Removable Washing Label	No	Compliance	RoHS, Lead Free	
Options						

RELIABILITY

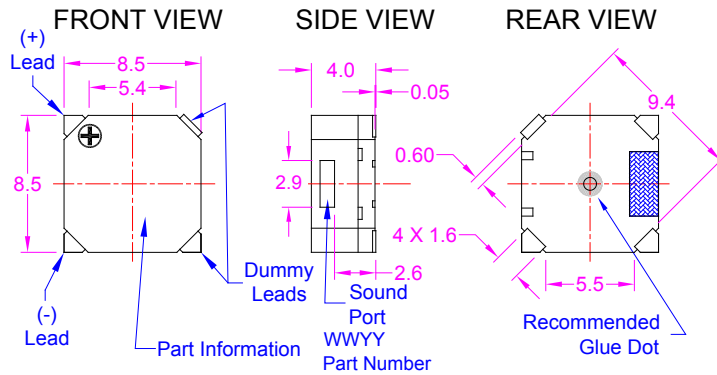
Thermal Operating Temperature Test	96 hours continuous operation at Rated Voltage, at Maximum Rated Operating Temperature *
	96 hours continuous operation at Rated Voltage, at Minimum Rated Operating Temperature *
Thermal Storage Temperature Test	96 hours storage at Maximum Rated Storage Temperatures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

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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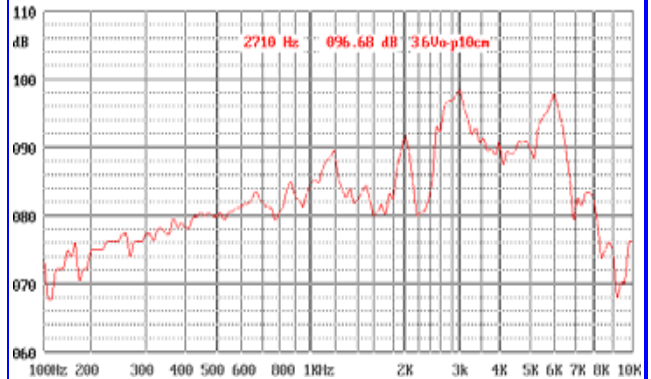


DIMENSIONS

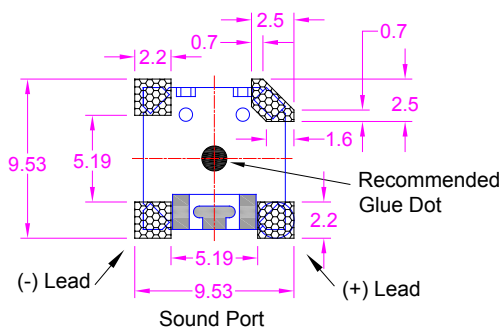
Units in: mm, Tolerance: ± 0.5 mm unless specified otherwise



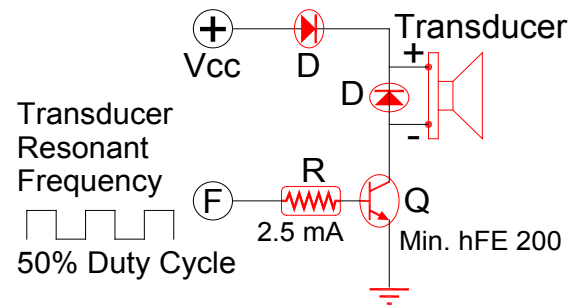
SPL vs. FREQUENCY RESPONSE



Recommended Land Pattern:



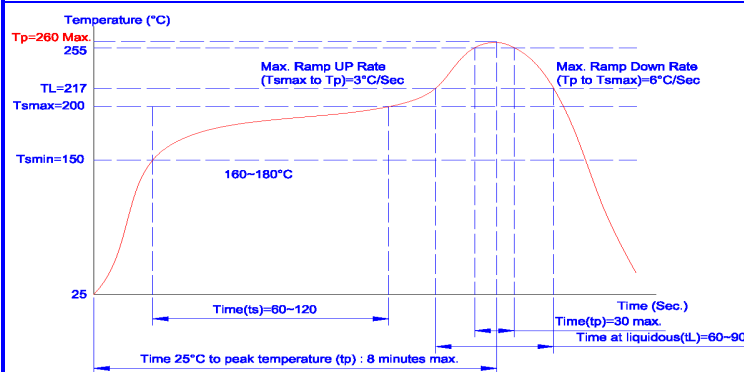
RECOMMENDED DRIVING CIRCUIT



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

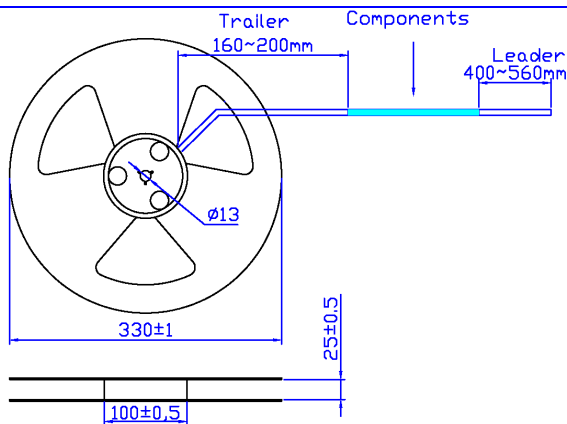
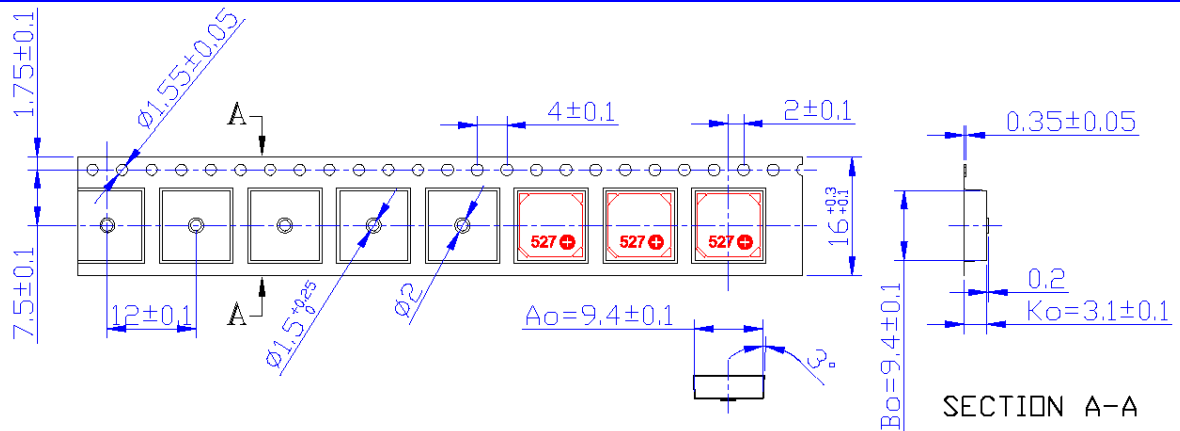
Solder Reflow Profile: as per IPC/JEDEC J-STD-020D



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

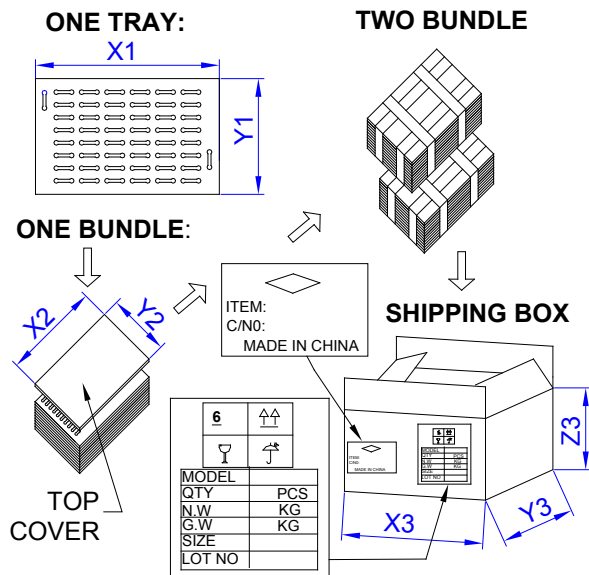


TAPE & REEL DIMENSIONS (Unit: mm)



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 1,200 parts

PACKAGING



MARKING

TRAY

Bundle		Dimensions	
Part Number		X1	cm
Quantity		Y1	cm
Lot and/or Date Code		Z1	cm
Bundle Number		Quantity	
		1,200	
Shipping Box		BUNDLE	
Part Number		X2	cm
Customer PN (if required)		Y2	cm
Quantity		Z2	cm
Lot and/or Date Code		Quantity	
PO Number		SHIPPING BOX	
Net Weight		X3	cm
Gross Weight		Y3	cm
Box Number of Boxes		Z3	cm
Made in China		Number of Bundles	
		Quantity	
		Approximate Weight	

Revision	Description	By:	Date:
2-2013	Corrected Dimension Drawing	Ely Zofan	6/17/2013
3-2013	Added Alternate Part Number: CSET8.5L3.6-17-2.7-5F	Walter Sargent	12/11/2013