




PRODUCT INFORMATION

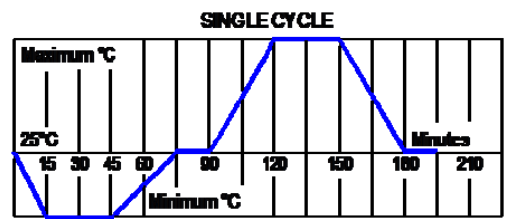
PART #	CEPT110L017-120-32MR	Revision: 0-2012
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SMD Piezoelectric Sound Transducer

DESCRIPTION	FEATURES	
<p>Challenge Electronics Piezoelectric Transducer, 11.0 mm Long, 9.0 mm Wide, L Style case (Square, Sides Sound Port), 1.7 mm High, 1 to 20 Vp-p Operating Voltage, 3,200 Hz. Resonant Frequency, Minimum output of 75 dB(A) at 10 cm at Rated Voltage, M Type SMD Termination, RoHS Compliance</p>	<ul style="list-style-type: none"> • Very Low Profile • Corrosion Resistance Diaphragm • Flame Retardant Plastic • RoHS • ISO 9001 	

SPECIFICATIONS									
Operating Voltage	1- 20 Vp-p	Rated Voltage	5.0 Vp-p	Resonant Frequency	3,200 ± 500 Hz.				
Sound Pressure Level	Minimum 75 dB(A), at: 10 cm, Rated Voltage, Resonant Frequency								
Operating Current	1 mA, at: Rated Voltage, Resonant Frequency			Capacitance	12,000 pFD ± 30% 100 Hz. 1 Vrms				
Operating Temperature	-40°C to + 105°C	Storage Temperature	-40°C to +120°C						
Material	Case	Plastic, LCP Vectra E130i			Sound Port Direction	Sides			
	Diaphragm	Ni Alloy Disc N42			Encapsulation	Plastic			
	Termination	SMD, 2 soldering pads, Sn plated Brass							
Physical Dimensions	Length or Diameter (L /D)	11.0 mm ø	Width (W)	9.0 mm	Height (H)	1.7 mm	Pins Spacing		
Approximate Weight	1.0 grams	Removable Washing Label	No	Compliance	RoHS				
Options									

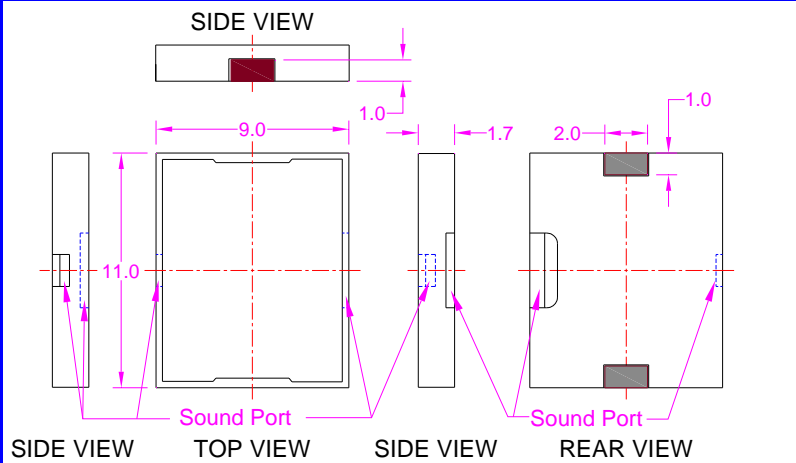
RELIABILITY	
Thermal Operating Temperature Test	<p>96 hours continuous operation at Rated Voltage, at Maximum Rated Operating Temperature *</p> <p>96 hours continuous operation at Rated Voltage, at Minimum Rated Operating Temperature *</p>
Thermal Storage Temperature Test	<p>96 hours storage at Maximum Rated Storage Temperatures *</p> <p>96 hours storage at Minimum Rated Storage Temperatures *</p>
Thermal Shock Test	<p>5 cycles of Minimum and Maximum Operating Temperature</p> <p>Each cycle shall be set per diagram and is 3 hours long *</p> <div style="text-align: center;">  <p>SINGLE CYCLE</p> <p>Maximum °C</p> <p>25°C 15 30 45 60 90 120 150 180 210 Minutes</p> <p>Minimum °C</p> </div>
Humidity Test	140 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	<p>Continuous Two hundred fifty (250) hours of continuous operation, at Rated Voltage, each at Minimum & Maximum Rated Operating Temperatures</p> <p>Intermittent One thousand (1,000) hours of: 1 minute ON 4 minutes OFF cycle, at Room Temperature, and Maximum Rated Voltage</p>
	<p>Warranty For a period of one (1) year from date of shipping under normal operations conditions</p> <p>This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair</p>

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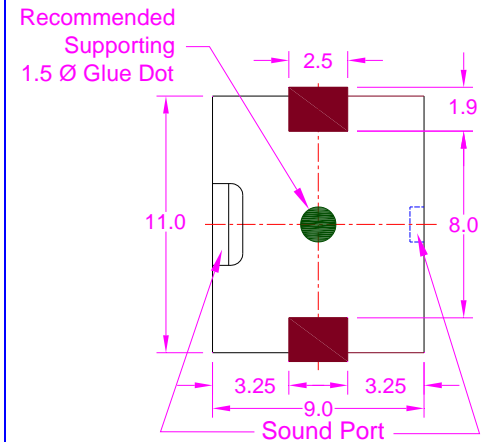


DIMENSIONS

Units in: mm, Tolerance: ± 0.3 mm unless specified otherwise.

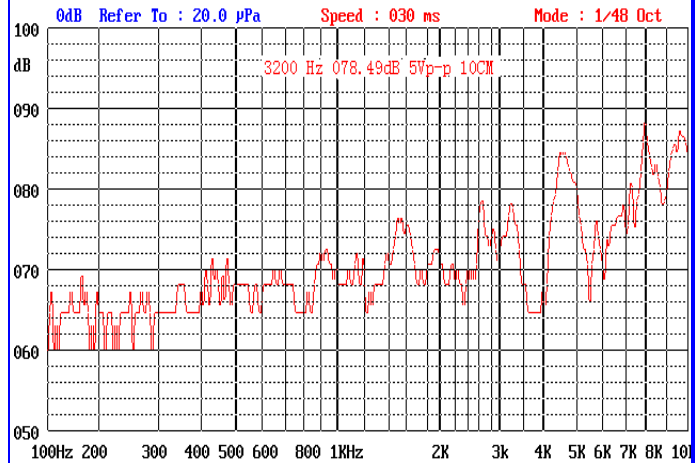


RECOMMENDED LAND PATTERN



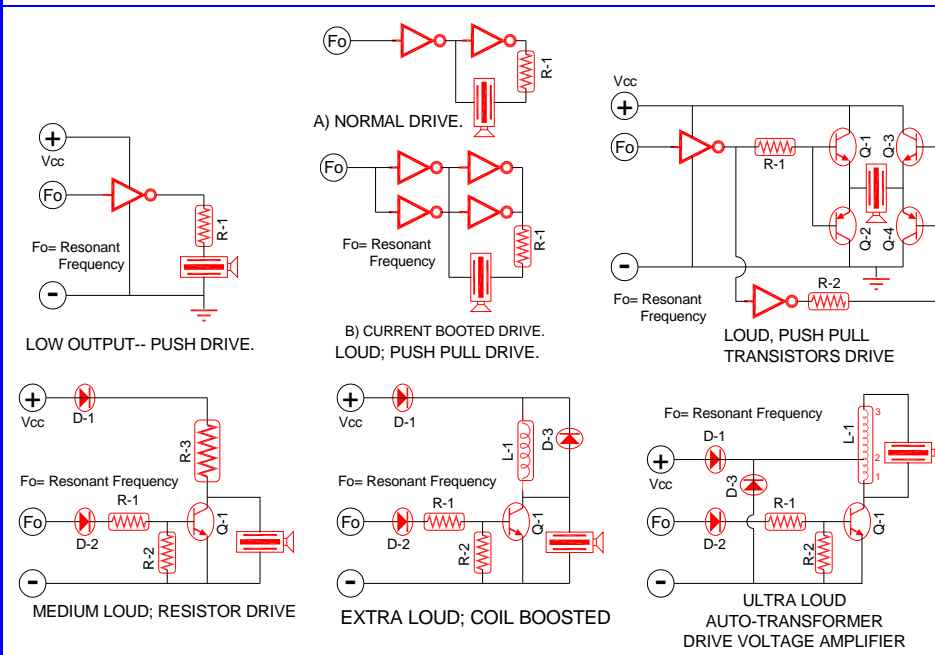
SPL and CURRENT vs. SUPPLY VOLTAGE

SPL vs. FREQUENCY RESPONSE



RECOMMENDED CIRCUIT DRIVE

STORAGE

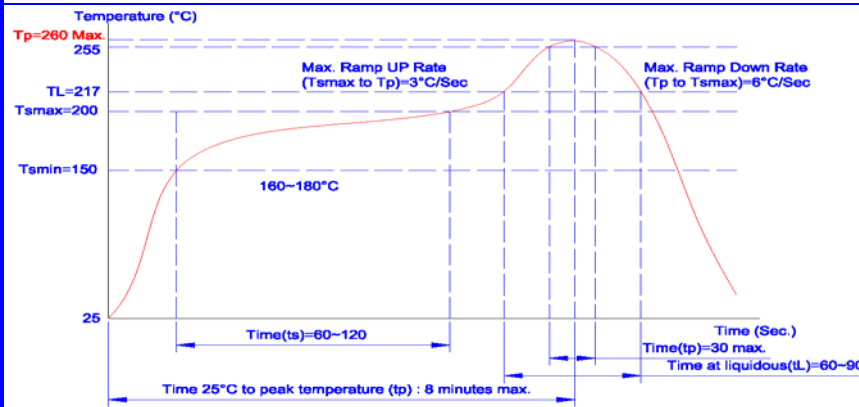


- Shelf life:** Twelve (12) months when devices are to be stored in factory supplied unopened ESD moisture sensitive bag under maximum environmental conditions of 30°C, 70% R.H.
- Exposure:** Devices should not be exposed to high humidity high temperature environment. MSL (moisture sensitivity level)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

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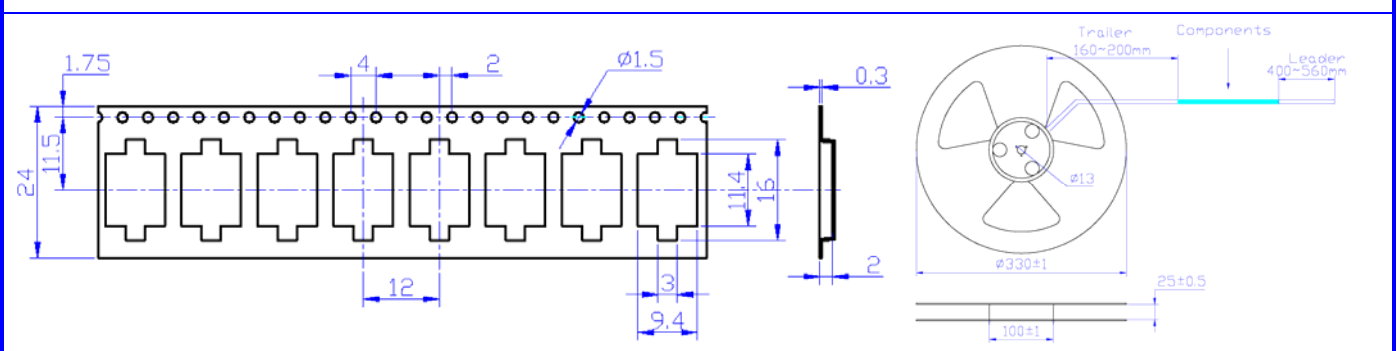


SOLDER REFLOW PROFILE



Stage	Temperature Profile	Maximum Time
Pre-heat	150~230°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 and REEL INFORMATION



- 110 sprocket holes pitch cumulative tolerance ± 0.20 mm
- Carrier camber not to exceed 1 mm in 100 mm
- Ao & Bo measured on a plane 0.3 mm above the bottom of the pocket
- Ko measured from a plane on the inside bottom of pocket to the top surface of the carrier
- All dimensions meet EIA-481-2-A requirements
- Component loaded 13" (330 mm) Reel: 2,500 parts

PACKAGING

	MARKING	Reel	
		Bundle	X1
Customer PN	Dimensions	Y1	33 cm
Other PN if required		Z1	0.3 cm
Quantity		Quantity	
Lot and/or Date Code	Box		
Bundle Number	Dimensions	X2	
Shipping Box		Y2	
Customer Part Number		Z2	
Other PN (if required)	Quantity		
Quantity	SHIPPING BOX		
Lot and/or Date Code	Dimensions	X3	cm
PO Number		Y3	cm
Net Weight		Z3	cm
Gross Weight	Number of Box		
Box Number	Quantity		
of Number of Boxes	Approximate Weight		Kg
Made in China			

