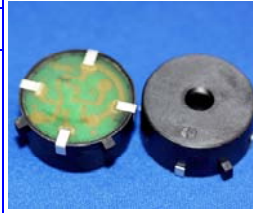




# PRODUCT INFORMATION

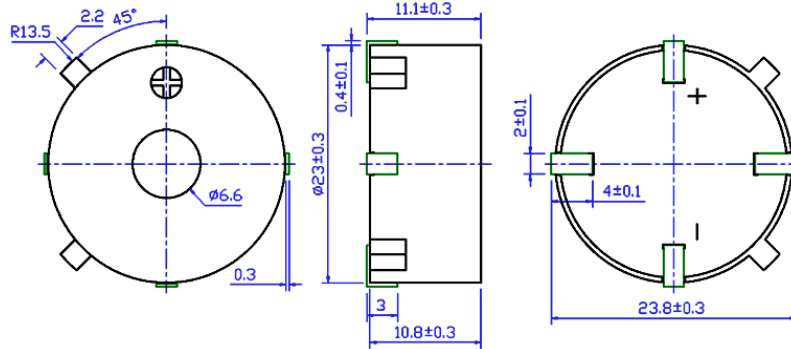
<b>PART #</b>	<b>CEPB238A111-618C32MHR</b>					<b>Revision: 0-2015</b>
<b>RoHS COMPLIANCE</b>	<b>SMD PIEZOELECTRIC BUZZER</b>					
<b>DESCRIPTION:</b>			<b>FEATURES:</b>			
<p><b>Challenge Electronics Piezoelectric Buzzer</b>, 23.8 mm diameter, <b>A</b> type case (Round No/Standoffs, and TOP Sound Port), 11.1 mm Height, 6 to 18 Vdc operation, <b>Continuous</b> Tone, 3,200 Hz Resonant Frequency, with a minimum output of 90 dB(A) at 9 Vdc, 10 cm, <b>SMD</b> Termination, <b>High Temp</b>, <b>RoHS</b> compliant</p>			<ul style="list-style-type: none"> <li>◆ <b>Extended Operating Temperature</b></li> <li>◆ <b>Flame Retardant Plastic</b></li> <li>◆ <b>Lead Free Reflowing Solderable</b></li> <li>◆ <b>ISO 9001 &amp; TS16949 Certified</b></li> <li>◆ <b>RoHS compliant</b></li> </ul>			
<b>SPECIFICATIONS</b>						
<b>Sound Type</b>	<b>Continuous Tone</b>	<b>Operating Voltage</b>	<b>6.0 - 18.0 Vdc</b>	<b>Nominal Rated Voltage</b>	<b>9.0 Vdc</b>	
<b>Sound Pressure Level</b>	<b>90 dB(A), at Nominal Rated Voltage, 10 cm</b>					
<b>Operating Current</b>	<b>10 mA, at Nominal Rated Voltage</b>					
<b>Resonant Frequency</b>	<b>3,200 ± 500 Hz.</b>	<b>Operating Temperature</b>	<b>-40°C to + 85°C</b>	<b>Storage Temperature</b>	<b>-40°C to + 90°C</b>	
<b>Material</b>	<b>Housing</b>	<b>Plastic, PPS A7-03 or equal</b>			<b>Sound Port Direction</b>	<b>Top</b>
	<b>Diaphragm</b>	<b>Ni Alloy Disc N42 or equal</b>			<b>Encapsulation</b>	<b>No</b>
	<b>Termination</b>	<b>4 soldering pads, Sn plated Brass</b>				
<b>Physical Dimensions</b>	<b>Diameter (D)</b>	<b>23.8 mm Ø</b>		<b>Height (H)</b>	<b>11.1 mm</b>	
<b>Approximate Weight</b>	<b>3.4 grams</b>	<b>Removable Washing Label</b>	<b>No</b>	<b>Compliance</b>	<b>RoHS</b>	
<b>Options</b>						
<b>RELIABILITY</b>						
<b>Thermal Operating Temperature Test</b>	<b>96 hours</b> continuous operation at <b>Rated Voltage</b> , at <b>Maximum Rated Operating Temperature</b> *					
	<b>96 hours</b> continuous operation at <b>Rated Voltage</b> , at <b>Minimum Rated Operating Temperature</b> *					
<b>Thermal Storage Temperature Test</b>	<b>96 hours</b> storage at <b>Maximum Rated Storage Temperatures</b> *					
	<b>96 hours</b> storage at <b>Minimum Rated Storage Temperatures</b> *					
<b>Thermal Shock Test</b>	<b>5 cycles</b> of Minimum and <b>Maximum Operating Temperature</b>					
	Each cycle shall be set per diagram below and is three (3) hours long *					
<b>Humidity Test</b>	<b>240 Hours</b> at +40°C±2°C. 90-95% RH *					
<b>Insulation Test</b>	A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case					
<b>Vibration Test</b>	2 Hours of at 1.5 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions *					
<b>Termination Strength</b>	Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds					
<b>Drop Test</b>	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) *					
<b>Solderability</b>	Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds					
<b>Soldering Heat Resistance</b>	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					
<b>* Reliability Test Performance</b>	<b>Parts should conform to original performance within ±3dB, after 3 hours of recovery period</b>					
<b>Operation Life Test</b>	<b>Continuous</b>	240 hours of continuous operation, at <b>Rated Voltage</b> , each at Minimum & Maximum Rated Operating Temperatures				
	<b>Intermittent</b>	One thousand (1,000) hours of: 1 minute <b>ON</b> 4 minutes <b>OFF</b> cycle, at Room Temperature, and <b>Rated Voltage</b>				
<b>Warranty</b>	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					



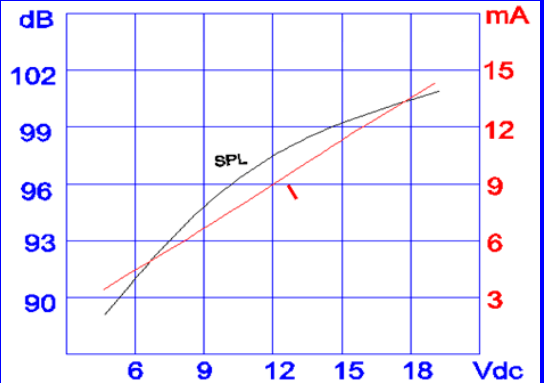


**DIMENSIONS**

Units in: mm, Tolerance:  $\pm 0.5$  mm unless specified otherwise



**SPL & CURRENT RESPONSE**

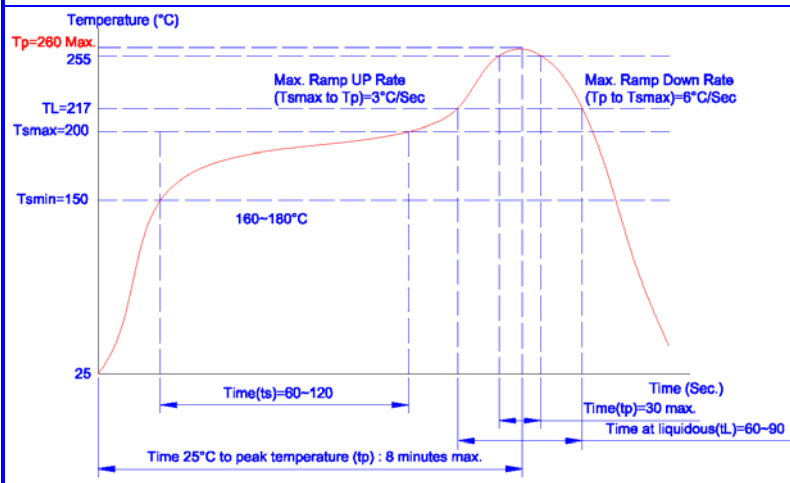


**RECOMMENDED LAND PATTERN**

**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

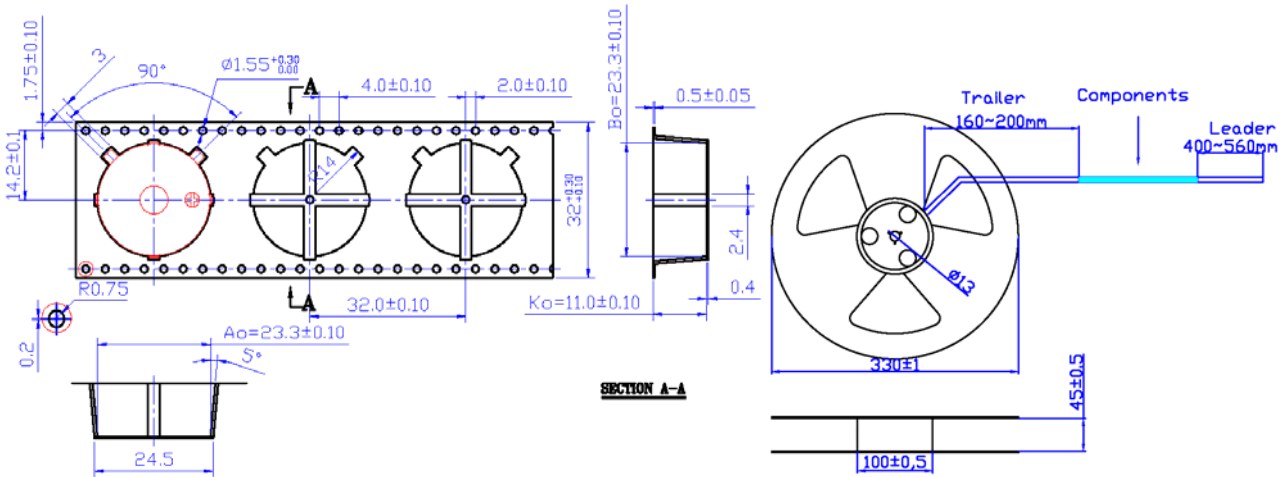
**Solder Reflow Profile:**



Stage	Temperature Profile	Maximum Time
Pre-heat	170~230°C	120 sec
Solder Melt	Above 230°C	90 sec
Peak	260°C Maximum	30 sec
Cool Down		90 sec
Total Duration Period		9 Minutes Maximum



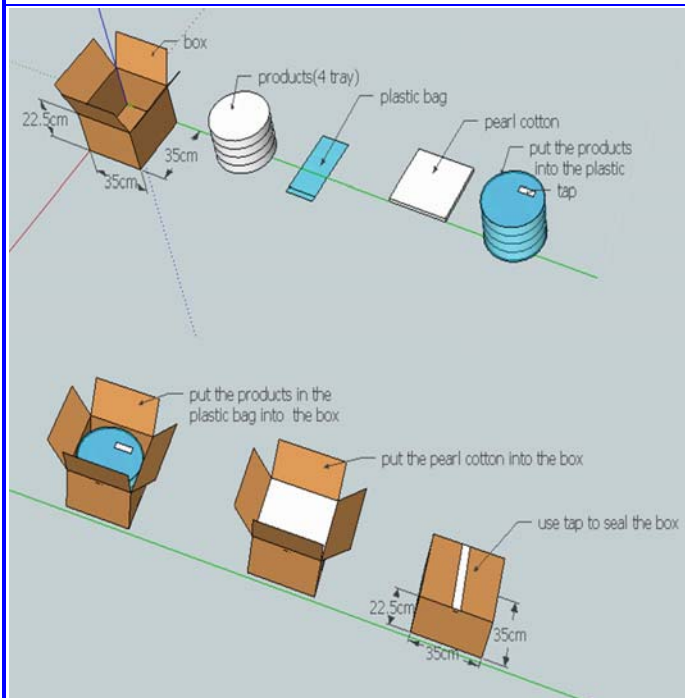
## TAPE and REEL INFORMATION



**NOTE:**

1. 10 sprocket holes pitch cumulative tolerance +/-0.20mm.
2. Carrier camber not to exceed 1 mm in 100 mm.
3. Ao & Bo measured on a plane 0.3 mm above the bottom of the pocket
4. Ko measured from a plane on the inside bottom of pocket to the top surface of the carrier.
5. All dimensions meet EIA-481-2-A requirements.
6. Component loaded per 13" reel: 150 pcs.

## PACKAGING



MARKING		Reel	
<b>Bundle</b>	Dimensions	X1	33.0 cm
Part Number		Y1	33.0 cm
Quantity		Z1	4.5 cm
Lot and/or Date Code		Quantity	
Bundle Number			
<b>Shipping Box</b>			
Part Number			
Customer PN (if required)			
Quantity			
Lot and/or Date Code	<b>SHIPPING BOX</b>		
PO Number	Dimensions	X3	35.0 cm
Net Weight		Y3	35.0 cm
Gross Weight		Z3	22.5 cm
Box Number of Boxes	Number of Reels	4	
<b>Made in China</b>	Quantity	600	
		Approximate Weight	4.6 kg.

Revision	Description	By:	Date