



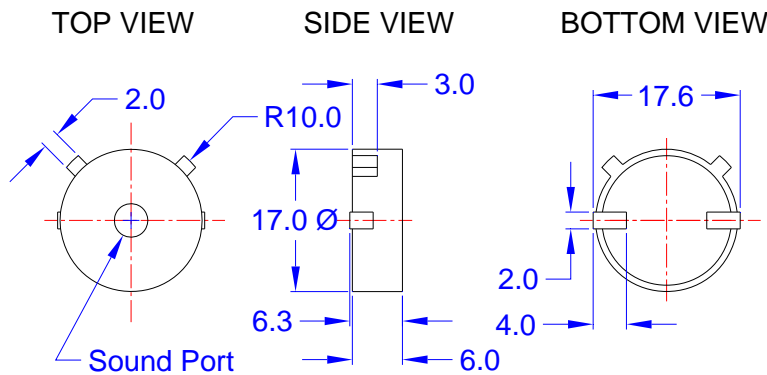
PRODUCT INFORMATION

PART #	CEPT170A060-12-125-40MR					Revision: 0-2011	
	SMD Piezoelectric Sound Transducer						
DESCRIPTION				FEATURES			
<p>Challenge Electronics Piezoelectric Transducer, 17.0 mm Long. Square, A Style case (Round, Top Sound Port), 6.0 mm High, 12 Vpp Rated Voltage, 1 to 25 Vpp Operating Voltage, 4,000 Hz. Resonant Frequency, Typical output of 97 dB(A) at 10 cm at Rated Voltage, M Type SMD Termination, RoHS Compliance</p>				<ul style="list-style-type: none"> • RoHS • ISO 9001 			
SPECIFICATIONS							
Operating Voltage	1- 25 Vpp		Rated Voltage	12.0 Vpp, Square Wave, 50% Duty Cycle			
Sound Pressure Level	Min. 90 dB(A), at: 10 cm, Rated Voltage, Resonant Frequency			Resonant Frequency	4,000 ± 500 Hz.		
Operating Current	3 mA, at: Rated Voltage, Resonant Frequency			Capacitance	15,000 pFD ± 30% 100 Hz. 1 Vrms		
Operating Temperature	-40°C to + 105°C		Storage Temperature	-40°C to +120°C			
Material	Case	Plastic, PPS A7-03A			Sound Port Direction	Top	
	Diaphragm	Ni Alloy Disc N42 or equal		Termination	SMD, 2 soldering pads, Sn plated Brass		
	Encapsulation	PCB					
Physical Dimensions	Length or Diameter (L /D)	17.0 mm ø		Width (W)	mm	Height (H)	6.0 mm
Approximate Weight	1.6 grams	Removable Washing Label	No	Compliance	RoHS		
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 *						
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Thermal Shock Test	5 cycles of Minimum and Maximum Operating Temperature, Each cycle shall be set per diagram and is 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 (6 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	Two hundred fifty (250) 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 Maximum Rated Voltage					
Warranty	For a period of one (1) year from date of shipping under normal operations conditions						

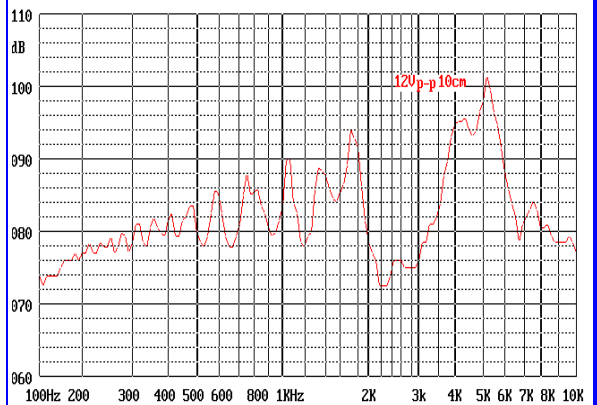


DIMENSIONS

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



SPL vs. FREQUENCY RESPONSE

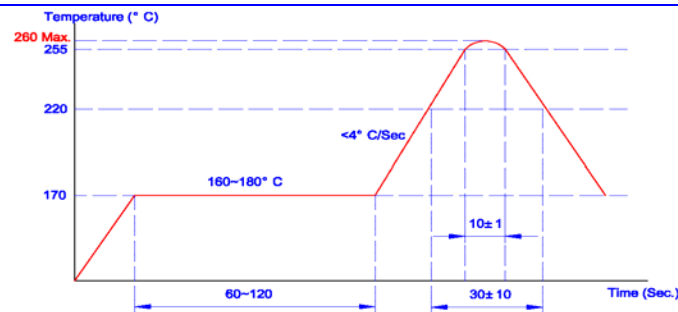


Recommended Land Pattern

Storage

- 1. **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

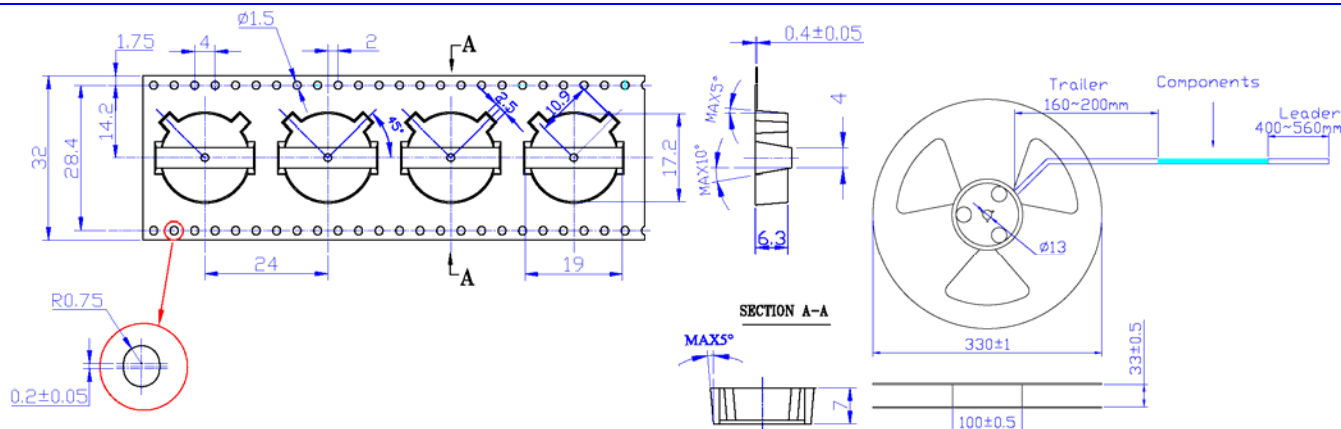
Solder Reflow Profile



Stage	Temperature Profile	Maximum Time
Pre-heat	170~230 $^{\circ}$ C	120 sec
Solder Melt	Above 230 $^{\circ}$ C	100 sec
Peak	260 $^{\circ}$ C Maximum	
Cool Down		100 sec
Total Duration Period		6 Minutes Maximum

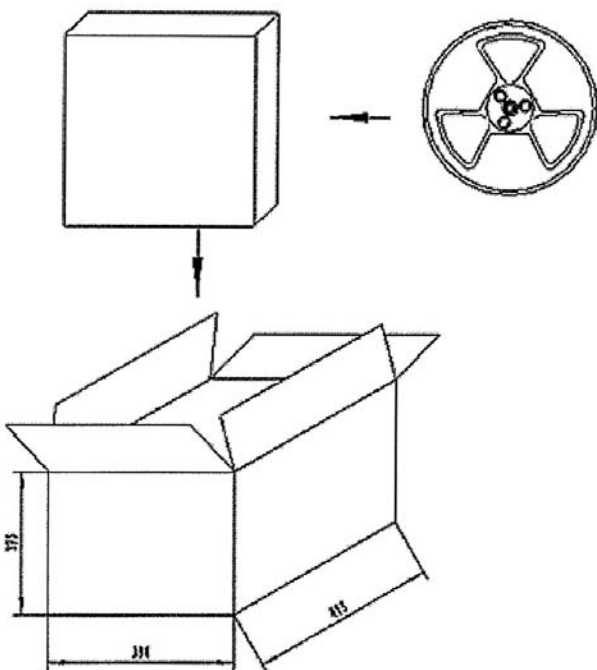


TAPE and REEL INFORMATION



1. 110 sprocket holes pitch cumulative tolerance ± 0.20 mm
2. Carrier camber not to exceed 1 mm in 100 mm
3. Ao & Bo measured on a place 0.3mm 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 4.8meters per 13" reel: 400 parts

PACKAGING



MARKING		Reel	
Bundle		X1	
Customer PN	Dimensions	Y1	
Other PN if required		Z1	
Quantity		Quantity	400
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		
Made in China			