Challenge Electronics Tel: 1-800-722-8197
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PRODUCT INFORMATION

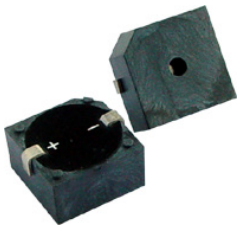
PART #	CEPB143N080-316C40MR	Revision: 1-2014
RoHS COMPLIANCE	SMD PIEZOELECTRIC BUZZER	

DESCRIPTION:

Challenge Electronics Piezoelectric Buzzer, 14.3 mm diameter, **N** type case (Square with Standoffs, Cutout Corner, and TOP Sound Port), **8.0** mm Height, **3** to **16** Vdc operation, **Continuous** Tone, **4,000** Hz Resonant Frequency, with a minimum output of 85 dB(A) at, 5 Vdc, 10 cm, **M** SMD Termination, **R**oHS Lead Free compliant

FEATURES:

- Extended Operating Temperature
- Flame Retardant Plastic
- Lead Free Reflowing Solderable
- ISO 9001 & TS16949 Certified
- RoHS compliant

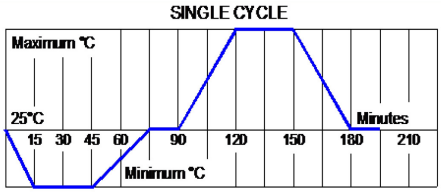


SPECIFICATIONS

Sound Type	Continuous Tone			Sound Pressure Level	85 dB(A), at Nominal Rated Voltage, 10 cm		
Operating Voltage	3.0 - 16.0 Vdc	Nominal Rated Voltage	5.0 Vdc	Operating Current	8 mA, at Nominal rated Voltage		
Resonant Frequency	4,000 ± 500 Hz.	Operating Temperature	-30ºC to + 85ºC	Storage Temperature	-40ºC to + 90ºC		
Material	Housing	N type, Plastic, LCP Vectra E130i, UL 94-V0 (UL #:E106764)		Diaphragm	Ni Alloy Disc N42		
	Termination	Two (2) soldering pads, Brass Nickel (Sn) plated		Encapsulation	Epoxy Potting		
Sound Port Direction	Top	Case Standoffs from PCB	Yes	Removable Washing Label	No		
Physical Dimensions	Length or Diameter (L /D)	14.3 mm Ø	Width (W)	14.3 mm	Height (H)	8.0 mm	Pins Spacing
Approximate Weight	1.6 grams	Compliance	RoHS				
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		5 cycles of Minimum and **Maximum Operating Temperature** Each cycle shell 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 (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	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 This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair



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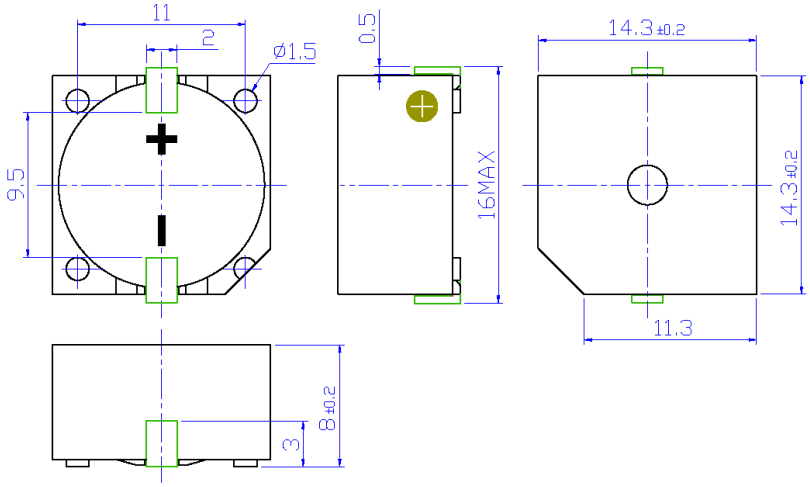
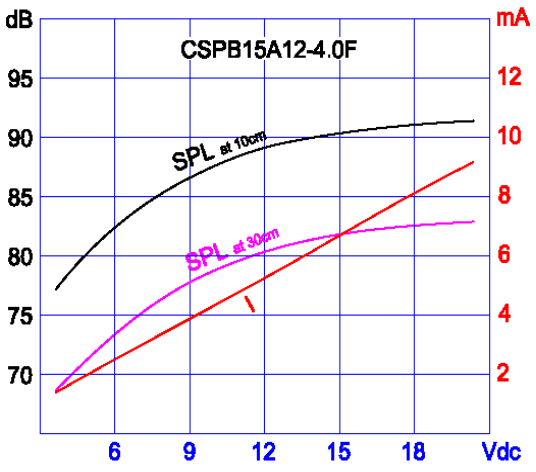
DIMENSIONS

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



SPL & CURRENT RESPONSE

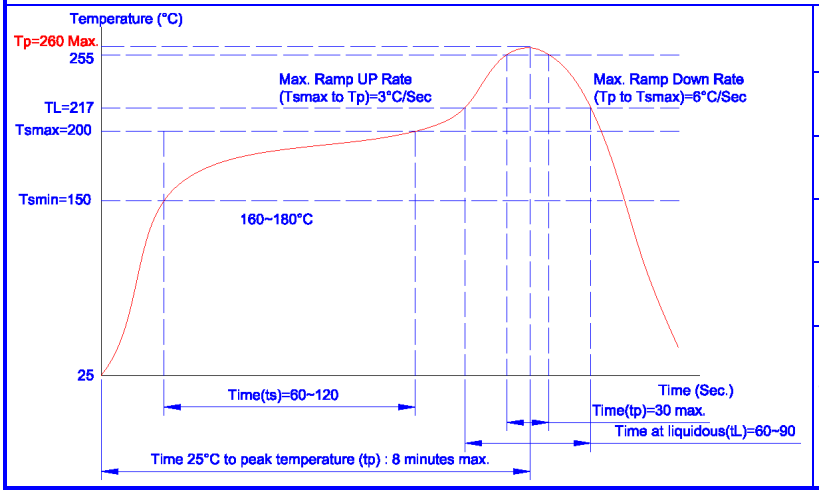


RECOMMENDED LAND PATTERN

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.**
2. **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	**170~230ºC**	**120 sec**
Solder Melt	**Above 230ºC**	**100 sec**
Peak	**260ºC Maximum**	
Cool Down		**100 sec**
Total Duration Period		**6 Minutes Maximum**

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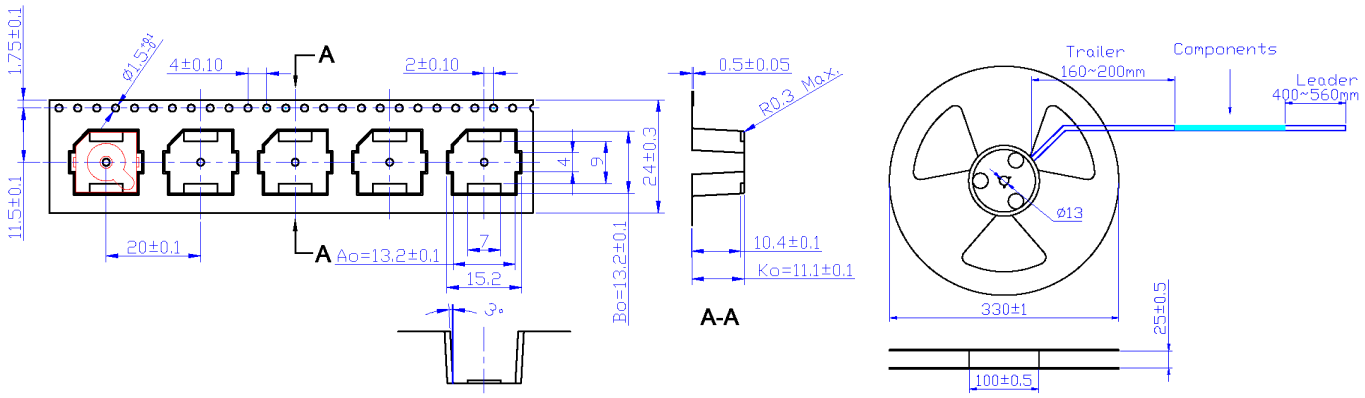
TAPE and REEL INFORMATION



1. 10 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 0.3 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 300 partsper 13" Reel

PACKAGING

MARKING	Reel		
Bundle	Dimensions	**X1**	**cm**
Customer PN		**Y1**	**cm**
Quantity		**Z1**	**cm**
Lot and/or Date Code	Quantity		**300**
Bundle Number	**Box**		
Shipping Box	Dimensions	**X2**	**cm**
Customer Part Number		**Y2**	**cm**
Other PN (if required)		**Z2**	**cm**
Quantity	Quantity		
Lot and/or Date Code	**SHIPPING BOX**		
PO Number	Dimensions	**X3**	**cm**
Net Weight		**Y3**	**cm**
Gross Weighjt		**Z3**	**cm**
Box Number	Number of Bundles		
of Number of Boxes	Quantity		
Made in China	Approximate Weight		

Revision	Description	By	Date
1-2014	Corrected Product Description (changed from electromagnetic to piezoelectric)	W.Sargent	2014-10-29