

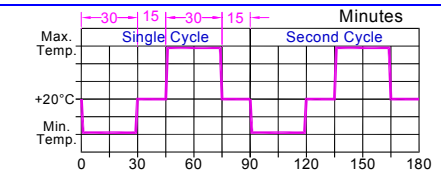




# PRODUCT INFORMATION

		<b>PART #</b>	<b>CEPB430X435-428A29SR</b>			<b>Revision: 0-2017</b>			
		<b>PIEZOELECTRIC BUZZER</b>							
<b>DESCRIPTION</b>					<b>FEATURES</b>				
<p><b>Challenge Electronics Piezoelectric Buzzer; 43.0 mm Diameter; X style, Round with Flange screw mounting case; 43.5 mm High; 4 - 28 Vdc Operating Voltage; Slow Pulse Tone (A); Resonant Frequency 2900 Hz; Minimum Sound Pressure Level at 88 dB(A) at 10 cm and Nominal Voltage; Blade w/Screw Termination; RoHS Compliant</b></p>					<ul style="list-style-type: none"> <li>• Flame Retardant Plastic</li> <li>• RoHS, Lead Free REACH (SVHC) Compliant</li> <li>• ISO 9001 Certified</li> </ul>				
<b>REACH DECLARATION COMPLIANCE</b>									
<p>The Piezoelectric-Ceramic-Disc article contains more than 0.1% (w/w) of REACH Candidate List SVHC <b>Lead-Zirconium-Titanium-Oxide</b> (CAS 12626-81-2), which is a key ingredient of the Piezoelectric-Ceramic-Disc in the Alarm operation. See section Substance Of Very High Concern and RoHS Compliance, page # 2, for full details.</p>									
<b>SPECIFICATIONS</b>									
<b>Alarm Type</b>		<b>Slow Pulse Tone</b>		<b>Sound Frequency</b>		<b>2900 ± 500 Hz.</b>		<b>Cycle Rate</b>	
<b>Operating Voltage</b>		<b>4 - 28 Vdc</b>	<b>Nominal Voltage</b>	<b>12 Vdc</b>					
<b>Sound Pressure Level</b>		<b>Minimum 88 dB(A) at 10 cm</b>							
<b>Operating Current</b>		<b>Max. 6 mA at Nom. Voltage</b>							
<b>Surge Voltage</b>									
<b>Operating Temperature</b>		<b>-20°C to +60°C</b>		<b>Storage Temperature</b>		<b>-30°C to +70°C</b>			
<b>Material</b>	<b>Housing</b>	<b>Plastic, ABS Black</b>				<b>Sound Port Opening</b>		<b>Top</b>	
	<b>Diaphragm</b>	<b>Brass</b>				<b>Encapsulation</b>		<b>Epoxy</b>	
	<b>Termination</b>	<b>Blade with Screws</b>							
<b>Physical Dimensions</b>		<b>Diameter</b>	<b>43.0 mm Ø</b>	<b>Height</b>	<b>43.5 mm</b>				
<b>Approximate Weight</b>		<b>43 grams</b>		<b>Removable Washing Label</b>	<b>No</b>	<b>Compliance</b>	<b>RoHS, Lead Free, and REACH (SVHC)</b>		
<b>Options</b>									
<b>RELIABILITY</b> * Reliability Test Performance After 3 hours cooling time, Parts should conform within ± 3 dB(A) to original performance									
<b>Thermal Operating Temperature Test</b>		<b>96 hours</b> continuous operation at <b>Rated Voltage</b> , at <b>Maximum Operating Temperature</b> *							
<b>Thermal Storage Temperature Test</b>		<b>96 hours</b> storage at <b>Maximum Storage Temperatures</b> *							
<b>Thermal Shock Test</b>		<b>5 cycles of Minimum and Maximum Operating Temperature</b>					 <p>Each cycle shall be set per diagram below and is three (3) hours long. Make sure to limit temperature range to specifications listed above *</p>		
<b>Humidity Test</b>		<b>120 Hours</b> at +60±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>		<b>2 Hours</b> 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 (6 times total) *							
<b>Solderability</b>		Lead terminals are immersed in rosin for 5 seconds then immersed in solder with Solder-Iron 350±5°C for 3±0.5 seconds							
<b>Life Test</b>	<b>Intermittent</b>	1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and maximum rated voltage							
	<b>Continuous</b>	250 hours continuous operation at <b>maximum rated Voltage and maximum Operating Temperatures</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							



<b>DIMENSIONS</b> Units in: mm Tolerance: ± 0.5 mm	<b>ASSEMBLY</b>

**Standard SPL & Current Measurement Process**

**X = 10 cm**  
**Y = 40 cm**

Y Minimum = 2 \* X  
Meter Settings: Fast Response "A" Scale

**MATERIALS**

7	Potting		Epoxy
6	Screw	1	Fe
5	Quoit	1	Black ABS
4	Housing	1	Black ABS
3	Lead pin	2	Brass
2	Piezo element	1	Brass
1	PCB		
No.	Part Name	Q'TY	Material

**ALARM MARKING**

On side Case or Back:	
On Back:	Polarity Identification (when required)
Date Code:	Date Code consists of 2 Digits for year number and 2 Digits for week

**SUBSTANCE OF VERY HIGH CONCERN (REACH) and RoHS LEAD FREE COMPLIANCE**

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and complies with European Union REACH Regulation No.1907/2006 regarding chemical substances that must be registered and disclosed

<b>Lead (Pb) / Lead Compounds</b>	≤1,000 ppm	≤ 10,000 ppm (*)	<b>Poly Brominated Diphenyl Ethers (PBDE)</b>	≤1,000 ppm	<b>In compliance</b>
<b>Mercury (Hg) / Mercury Compounds</b>	≤1,000 ppm	<b>In compliance</b>	<b>Bis (2-Ethylhexyl) Phthalate (DEHP)</b>	≤1,000 ppm	<b>In compliance</b>
<b>Cadmium (Cd) / Cadmium Compounds</b>	≤ 100 ppm	<b>In compliance</b>	<b>Butyl Benzyl Phthalate (BBP)</b>	≤1,000 ppm	<b>In compliance</b>
<b>Hexavalent Chromium (Cr VI)</b>	≤1,000 ppm	<b>In compliance</b>	<b>Dibutyl Phthalate (DBP)</b>	≤1,000 ppm	<b>In compliance</b>

(\*) European Union Directive 2011/65/EU (RoHS Directive) of the European Parliament, and of the Council of 8 June 2011 and all subsequent amendments, The ANNEX III of the Directive Applications exempted from the restriction in Article 4(1): 7(c)-I. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. Piezoelectric devices, or in a glass or ceramic matrix compound Piezoelectric is also known as Lead Zirconate Titanate (PZT) ceramics. Piezoelectric Ceramic disc, (PZT), lead as high covalent compound in the ceramic matrix to achieve good ferroelectric properties in a wide temperature range. The best-known performances can be reached with PZT ceramics, which are a mixture of PbTiO3 and PbZrO3. The lead content, homogeneous material compound is between 58% and 68% by weight depending on the proportion of zirconium (Zr) and titanium (Ti)

- 1) According to the REACH terminology, Challenge Electronics acknowledge being Producers, Importers and Marketer of Sound Devices Articles, which do not contain Substances of Very High Concern (SVHC's) to be intentionally released
- 2) Challenge Electronics hereby declares, to the best of our knowledge and based on our China Manufacturers and Fabricators information, that, all Challenge Electronics Sound Devices Articles are chemically safe, and should not harm any human, animals, or the environment
- 3) It should be noted that SVHC items are not banned from inclusion, but are Reportable per current REACH regulations
  - a) With the exception of The Piezoelectric-Ceramic-Disc article that CONTAINS more than 0.1% (w/w) of REACH Candidate List SVHC Lead-Zirconium-Titanium-Oxide (CAS 12626-81-2), which is a key ingredient of the Piezoelectric-Ceramic-Disc in the Alarm operation. See also the RoHS Compliance ANNEX III of the Directive Applications exempted from the restriction in Article 4(1)
  - b) Some SMD and Dip type Capacitors CONTAINS one of the following Lead Oxides published in the ECHA SVHC Candidate List at or greater than 0.1% of total weight: Lead monoxide (CAS 1317-36-8), Lead titanium zirconium oxide (CAS 12626-81-2)
- 4) In all cases, the lead substance is chemically combined in Capacitors and presents no hazard to humans or the environment under normal handling and use. In addition, Challenge Electronics complies with the restrictions stated in Annex XVII of REACH

**IMDS Guide for Piezoelectric**  
Automotive Industry Interpretation Guide for ELV Annex II (2016/774/EU) with IMDS Information added by the IMDS Steering Committee

- Interpretation Guide for ELV Annex II (2016/774/EC) Version 3.0
- Definition/interpretation of -Exemption (10a)

**Examples for components covered by (10a)**  
a) **Piezoceramics**  
Piezoceramics are characterized through their ability to transform mechanical energy in electrical energy and reciprocal. They fulfil technical functions as actuators, sensors, generators and motors. They are used for instance in Actuators for diesel and gasoline injection valves, knock sensors, resonator and filter, actuators, bending actuators for pneumatic valves, tire Pressure Sensors, ceramic sensors (like ABS, air bag, pressure, car navigation sensors), **Piezoelectric Alarms, Piezoelectric buzzers, Piezoelectric Sound Transducers, Ultrasonic Sensor and Transmitter**. The lead content in the Piezoceramics ceramics is around 50 to 70% by weight, depending on the content of dopants, required functional properties and on the proportion of Zirconium (Zr) and Titanium (Ti)

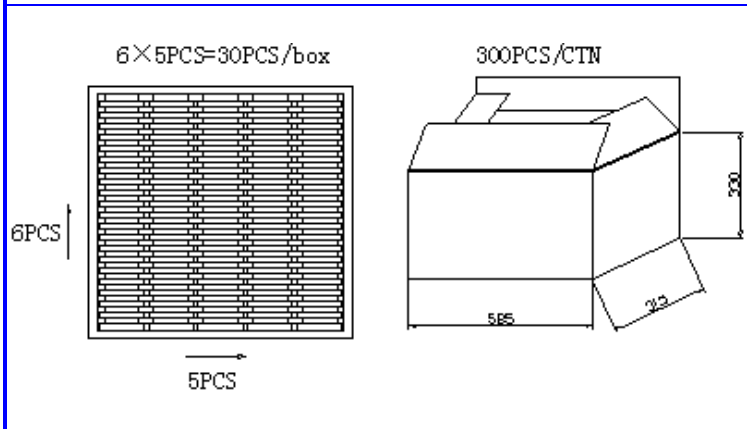
**Lead Zirconium Titanium Oxide Information Basic information**

Density:	7.7 g/cm <sup>3</sup>	CAS #:	12626-81-2	EC #:	235-727-4	Inclusion Date:	12/19/2012	DN:	ED/169/2012	Product Categories:	Inorganics
<b>Safety Information:</b>	RIDADR:	UN1993	TSCA:	Yes	Hazard Class:	3	Packing Group:	III			

In Challenge Electronics role as Supplier, we have taken the necessary steps towards our China Manufacturing in order to get a written confirmation about their knowledge of the Regulation and their analysis of the impact on their company



**PACKAGING**



Shipping Box MARKING		TRAY	
Part Number	Dimensions	L	cm
Other PN (if required)		W	cm
Lot and/or Date Code		H	cm
Quantity	Quantity	30	
PO Number	<b>SHIPPING BOX</b>		
Net Weight	Dimensions	L	58.5 cm
Gross Weight		W	31.5 cm
Box Number of Boxes		H	33.0 cm
RoHS Lead Free Compliance	Quantity	300	
	Approximate Weight	Kg	
	Dimensions Weight	Kg	
	Volume	M <sup>3</sup>	
	Made in	China	

Revision	Description	By	Date