



**Mallory Sonalert Products, Inc.**

Part #: **MSR320R**

**Sales Outline Drawing**

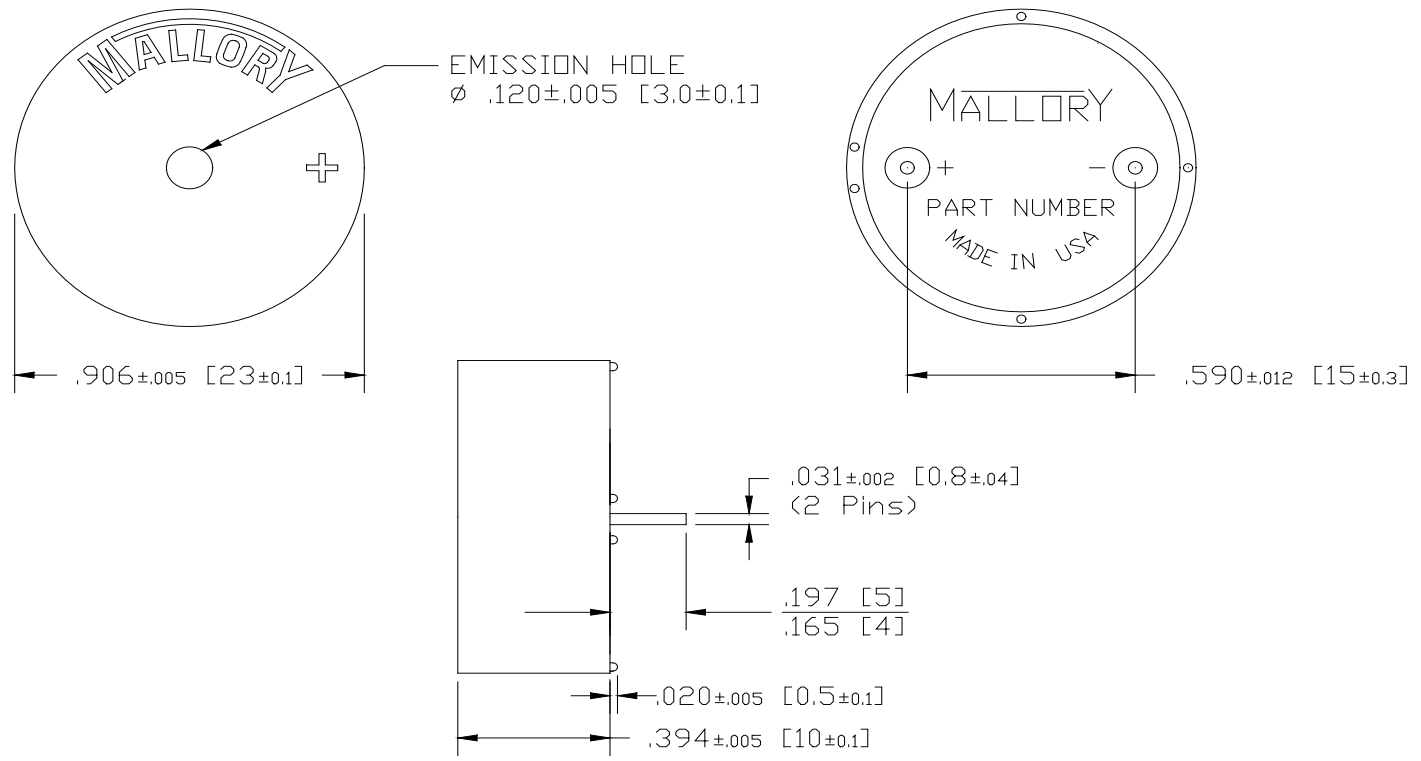
Revision: **E**

**Specifications:**

Sound Level Category	Medium
Mode of Operation	Continuous
Voltage Rating	3 to 20 VDC
Frequency	3500 ± 500 Hz
Loudness @ 1 FT	73 to 86 dB(A) Typ.
Current Draw	3-16 mA
Housing Material	Valox (UL94V-0), Color Blue
Storage Temperature	-40° to +85°C
Operating Temperature	-40° to +85°C
Weight (Typical)	3.5g
Options	Please contact factory.

**Dimensions:** Inches (mm)

**ROHS Compliant**



NOTE A:  
TERMINALS - .031" DIA. NICKEL/TIN COATED BRASS.

NOTE B:  
MOUNTING- INSERT INTO PRINTED CIRCUIT BOARD AND HAND OR MACHINE SOLDER.  
UNITS ARE SUITABLE FOR WAVE SOLDERING. RECOMMENDED MAXIMUM TEMPERATURE  
AND TIME DURATION FOR WAVE SOLDERING IS +270°C AND 3 SECONDS RESPECTIVELY.

**Aqueous Wash:**

In order to process MSR & MSO Series buzzers through an aqueous wash, the buzzer must have a wash label and be sealed on the back with epoxy. Sealed buzzers have a “SR” suffix in the part number. For example, P/N MSR320SR is sealed and appropriate for aqueous wash. P/N MSR320R is not sealed.

After aqueous wash, the wash label must be removed from the buzzer.

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**Wave Solder Profile:**

Refer to the wave solder machine manufacturer’s recommended wave solder profile. If needed, adjust the maximum time & temperature to 270°C for 3 seconds to process MSR & MSO series buzzers.

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**Moisture Sensitivity Level (MSL):** Level 1 (Unlimited)

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**Packaging:** All parts are bulk packed.

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**Origin:** Made in USA

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**Sound Level vs Distance:**

Sound level decreases as the sound waves travel over distance, so it is important to note the specified distance when comparing sound levels. For example, if a buzzer measures 88 decibels (dB) at 30 cm, then it will measure:

97 dB @ 10 cm

82 dB @ 60 cm

78 dB @ 1 Meter

Mallory Sonalert has developed a tool to help convert sound levels depending on the distance. You can download the tool from our website: <http://www.mallory-sonalert.com/PerformanceCurves/Sound%20Level%20Distance%20Conversion%20Tool.xls>