

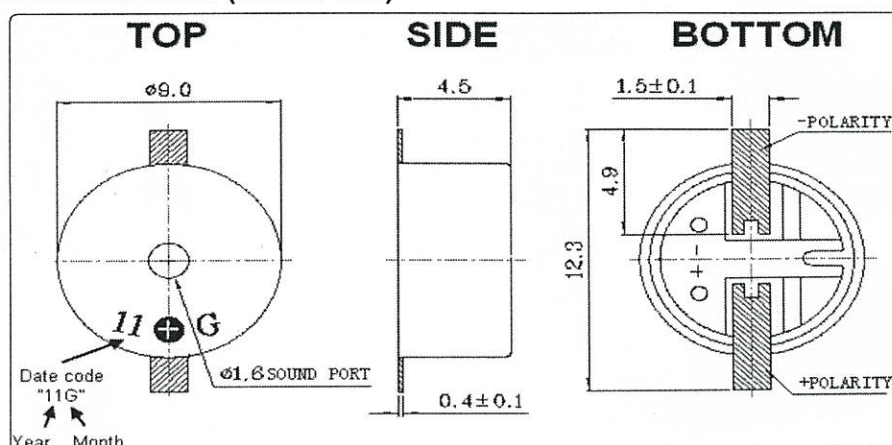
# SCOPE: This specification applies SMT E/M Buzzer TRSTE-0903

## 1. SPECIFICATIONS

PARAMETERS	VALUES	UNITS
*MIN SOUND PRESSURE LEVEL AT 10 CM	85	dBA
RATED VOLTAGE	3	Vo-p
OPERATING VOLTAGE	2 – 4	Vo-p
RESONANCE FREQUENCY	2,730	Hz
*MAX OPERATING CURRENT	80	mA
COIL RESISTANCE	16 ± 3	Ohm
OPERATING TEMPERATURE	-40 to +85	°C
STORAGE TEMPERATURE	-40 to +85	°C
HOUSING MATERIAL	PPS	-
TERMINA MATERIAL	Au plated Brass	-
WEIGHT	0.8	g

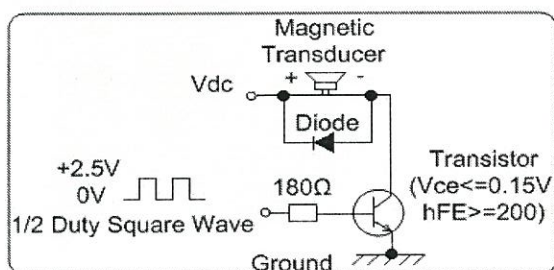
\*Value applying rated voltage (1/2 duty square wave, resonance frequency)

## 2. DIMENSIONS (unit in mm)

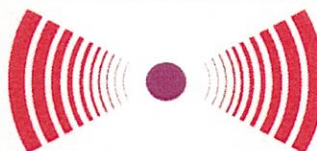


Tolerance:  $\pm 0.5$ mm except specified

## 3. RECOMMENDED CIRCUIT



Transducers USA  
Confidential and Proprietary



Transducers USA  
1400 Howard Street  
Elk Grove, IL 60007  
Toll Free: 888-921-6400 FAX: 847-956-1950  
[www.tusainc.com](http://www.tusainc.com) info@tusainc.com

All dimensions are in MM unless otherwise specified

Drawing Number:  
**TRSTE-0903**

**SMT E/M Buzzer**  
**1 of 4**

Date:  
11/20/2014

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA, INC. AND EXCEPT FOR USE EXPRESSLY GRANTED TO THE UNITED STATES GOVERNMENT, TRANSDUCERS USA, INC. RESERVES ALL PATENT PROPRIETARY DESIGN, USE, SALE, MANUFACTURING AND PRODUCTION RIGHTS THERETO. THIS DOES NOT APPLY TO VENDOR

#### 4. RELIABILITY TEST

##### a) HIGH TEMPERATURE TEST

After exposure at  $+80 \pm 2^\circ\text{C}$  for 96 hours and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

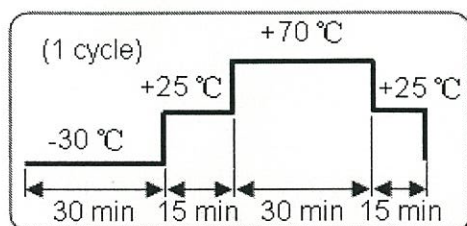
##### b) LOW TEMPERATURE TEST

After exposure at  $-40 \pm 2^\circ\text{C}$  for 96 hours and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

##### c) HUMIDITY TEST

$25 \pm 2^\circ\text{C}$ , 90-95%RH, 5hr=>up to  $55 \pm 2^\circ\text{C}$ , 90-95%RH, 0.5hr => $55 \pm 2^\circ\text{C}$ , 90-95%RH, 5hr=>down to  $25 \pm 2^\circ\text{C}$ , 90-95%RH, 0.5hr, 10 cycles

##### d) THERMAL SHOCK TEST



After exposure to above temperature cycle for 5 times and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

##### e) VIBRATION TEST

After vibrating the object with 1.5mm amplitude at 10 - 50 Hz in 3 perpendicular directions for 2 hours each, the value of frequency/current/SPL should meet specifications shown in page 2.

##### f) DROP TEST

After Dropping naturally from 700mm height onto the surface of 10mm wooden board with 3 directions, the value of frequency/current/SPL should meet specifications shown in page 2.

##### g) SOLDERING HEAT RESISTANCE

Samples put through reflowing soldering oven 2 twice

##### h) SOLDERABILITY

Samples put on PCB with solder paste through reflowing soldering oven 1 times

**Transducers USA**  
Confidential and Proprietary



**Transducers USA**  
1400 Howard Street  
Elk Grove, IL 60007  
Toll Free: 888-921-6400 FAX: 847-956-1950  
[www.tusainc.com](http://www.tusainc.com) info@tusainc.com

All dimensions are in MM unless otherwise specified

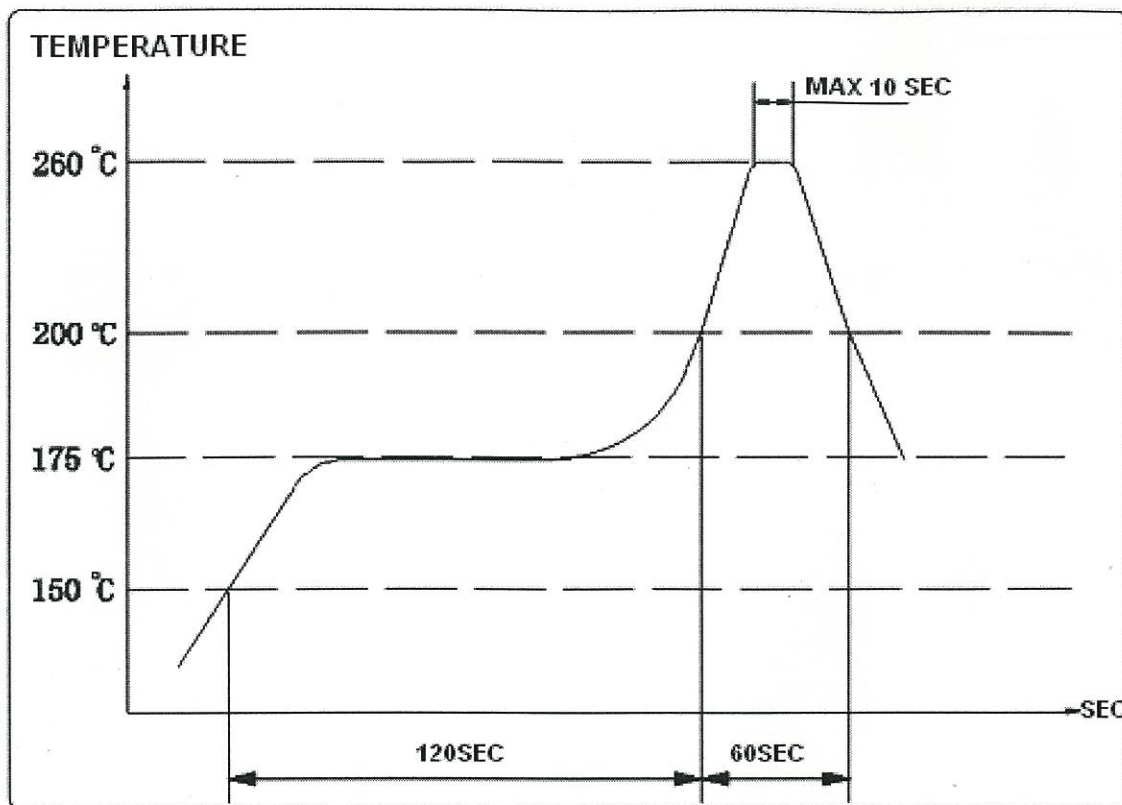
Drawing Number:  
**TRSTE-0903**

**SMT E/M Buzzer**  
**2 of 4**

Date:  
**11/20/2014**

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA, INC. AND EXCEPT FOR USE EXPRESSLY GRANTED TO THE UNITED STATES GOVERNMENT, TRANSDUCERS USA, INC. RESERVES ALL PATENT PROPRIETARY DESIGN, USE, SALE, MANUFACTURING AND PRODUCTION RIGHTS THERETO. THIS DOES NOT APPLY TO VENDOR

## 5. RECOMMENDED REFLOWING PROFILE



Transducers USA  
Confidential and Proprietary



**Transducers USA**  
1400 Howard Street  
Elk Grove, IL 60007  
Toll Free: 888-921-6400 FAX: 847-956-1950  
[www.tusainc.com](http://www.tusainc.com) info@tusainc.com

All dimensions are in MM unless otherwise specified

Drawing Number:  
**TRSTE-0903**

**SMT E/M Buzzer**  
**3 of 4**

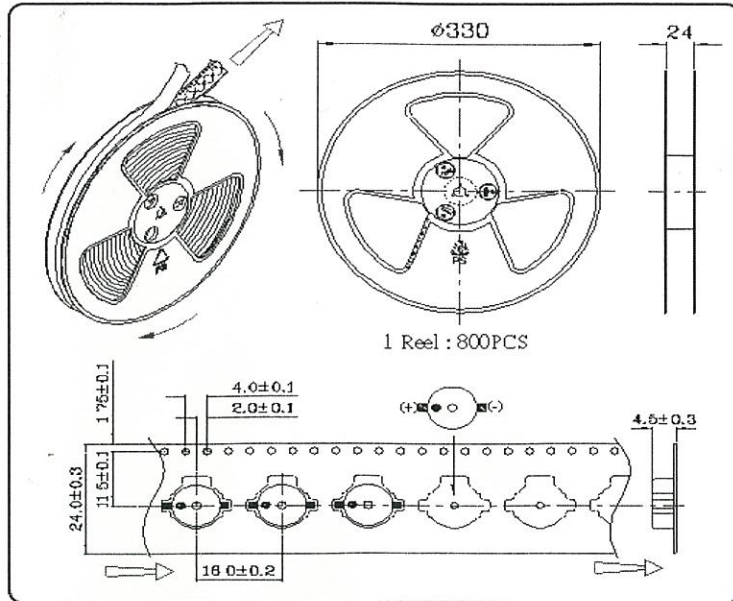
Date:  
11/20/2014

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA, INC. AND EXCEPT FOR USE EXPRESSLY GRANTED TO THE UNITED STATES GOVERNMENT, TRANSDUCERS USA, INC. RESERVES ALL PATENT PROPRIETARY DESIGN, USE, SALE, MANUFACTURING AND PRODUCTION RIGHTS THERETO. THIS DOES NOT APPLY TO VENDOR

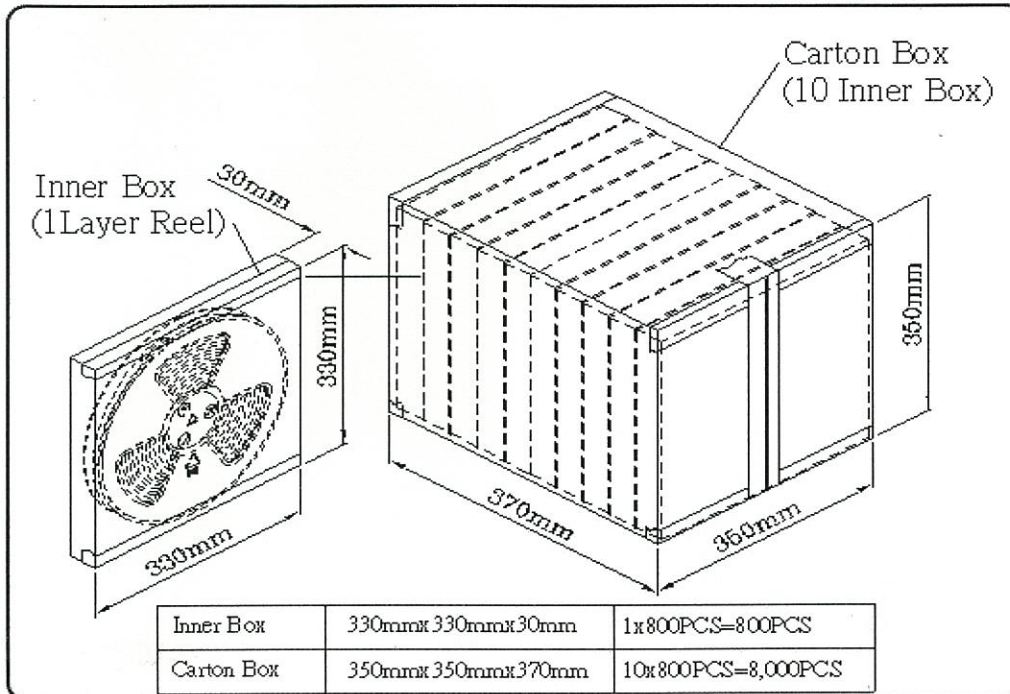


## 6. PACKING INFORMATION

### a) Tape and Reel dimensions



### b) Carton view dimensions



**Transducers USA**  
Confidential and Proprietary



**Transducers USA**  
1400 Howard Street  
Elk Grove, IL 60007  
Toll Free: 888-921-6400 FAX: 847-956-1950  
[www.tusainc.com](http://www.tusainc.com) info@tusainc.com

All dimensions are in MM unless otherwise specified

Drawing Number:  
**TRSTE-0903**

**SMT E/M Buzzer**  
**4 of 4**

Date:  
11/20/2014

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA, INC. AND EXCEPT FOR USE EXPRESSLY GRANTED TO THE UNITED STATES GOVERNMENT, TRANSDUCERS USA, INC. RESERVES ALL PATENT PROPRIETARY DESIGN, USE, SALE, MANUFACTURING AND PRODUCTION RIGHTS THERETO. THIS DOES NOT APPLY TO VENDOR