# This specification applies to SMD Piezo audio transducer, TRSTE-1712P

#### A. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Rated Voltage	Vp-p	10	
2	Operating Volt range	Vp-p	1 ~ 20	
3	Rated Current	mA	MAX 10	at Rated Voltage
4	Min Sound Pressure Level	dB	MIN 85	at 10cm/Rated Voltage - Rated Frequency
5	Resonant frequency	Hz	5000+/-500	Rated Voltage
6	Capacitance	pF	15000 +/- 30%	At 100Hz
7	Operating Temp	С	-20 ~ +70	
8	Storage Temp	С	-30 ~ +80	
9	Weight ( MAX)	gram	2	
10	Material		PPS	
11	Environmental Protection Regulation		RoHS	

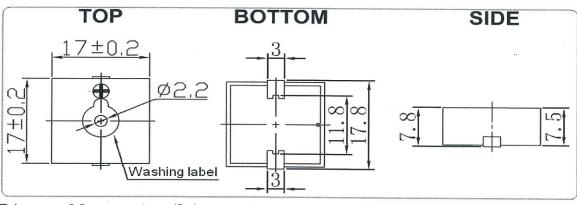
**Test Condition** 

**Standard** Temperature: 15 ~ 35C

Relative Humidity: 45% ~ 85% Relative Humidity: 60% ~ 70% Pressure: 860mbar to 1060mbar Pressure: 860mbar to 1060mbar

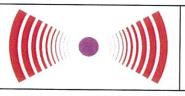
Judgment Temperature: 20 +/-3C

### **B. APPEARANCE DRAWING**



Tolerance: ±0.5mm except specified

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 info@tusainc.com

All dimensions are in MM unless otherwise specified

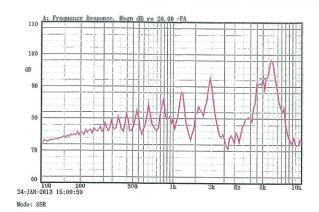
Drawing Number: TRSTE-1712P

SMD Piezo Buzzer 1 of 3

Date: 1/15/2013

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA; INC. AND EXCEPT FOR USESEXPRESSLY 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

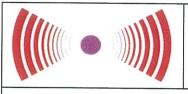
#### C. FREQUENCY RESPONSE CURVE



## D. RELIABILITY TEST

			T
No	Item	Test Condition	Evaluation Standard
1	High Temp Storage Life	Part shall be capable of withstanding a storage temperature of 80C for 120 hours	
2	Low Temp Storage Life	Part shall be capable of withstanding a storage temperature of -30C for 120 hours	
3	Temp Cycle	Part shall be subjected to 10 cycles. One cycle shall of: 80 ° C  -30 ° C  30 min 30 min 60 min	
4	Temp / Humidity	Part shell be subjected to 90-95% RH at +40C for 96 hours	Part shall meet specifications without any degradation in appearance and performance except S.P.L. S.P.L. shall be +/- 7dB
5	Operating Test Life	Rated Voltage and Frequency applied; 1. Ordinary temperature. The part shall be subjected to 1000 hours at room temperature (25+/-10C). 2. High Temperature. The part shall be subjected to 500 hours at 70C. 3. Low temperature. The part shall be subjected to 500 hours at -20C	
6	Vibration	Buzzer shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55 Hz of band vibration frequency to each of 3 perpendicular directions for 6 hrs	

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 info@tusainc.com

All dimensions are in MM unless otherwise specified

Drawing Number: TRSTE-1712P

SMD Piezo Buzzer 2 of 3

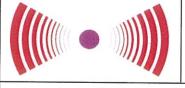
Date: 1/15/2013

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA: INC. AND EXCEPT FOR USESEXPRESSLY 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

#### E. SOLDERING / FLOW SOLDERING PROFILE

No	Item	Test Condition	Evaluation Standard
1	Solder Ability	Hand soldering: 360 +/- 5 C / < 2 sec	
2	Flow Solder Bath	Soldering into bath:  250°C 260°C MAX 225°C Max.10sec 180°C 150°C Max.60sec	Part shall meet specifications without any degradation in appearance and performance except S.P.L. S.P.L. shall be +/- 7dB
3	Wash Ability	1. Solvent: Deionized Water 2. Solvent Temp: 55 +/- 5C 3. Soaking time: 5 +/5 min	
Note:	After solder bath,	the cooling time must be longer than 2 ours before function test	

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 info@tusainc.com

All dimensions are in MM unless otherwise specified

Drawing Number: TRSTE-1712P

SMD Piezo Buzzer 3 of 3

Date: **1/15/2013** 

THE INFORMATION DISCLOSED HEREIN WAS ORIGINATED BY AND IS THE PROPERTY OF TRANSDUCERS USA; INC. AND EXCEPT FOR USESEXPRESSLY 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