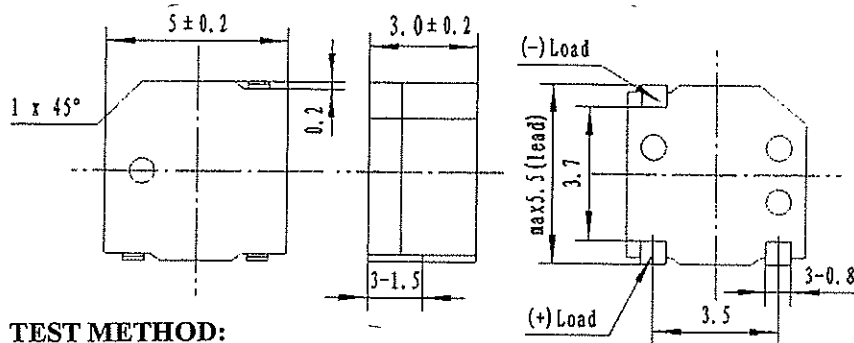


## SMD ELECTRO-MAGNETIC TRANSDUCER

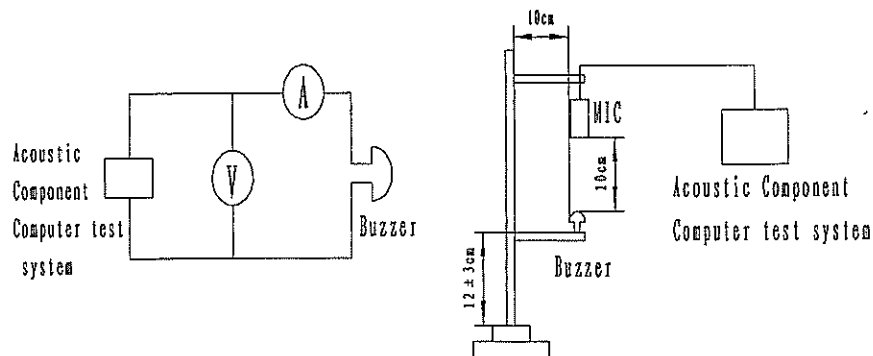
1	Model No.	
2	Rated Voltage (V)	3
3	Operating Voltage (V)	2 ~ 5
4	Resonant Frequency (Hz)	4000
5	Coil Resistance ( $\Omega$ )	12 $\pm$ 2
6	*Sound Output at 10cm (dB)	$\geq$ 78
7	*Current Consumption (mA)	$\leq$ 100
8	Operating Temperature ( $^{\circ}$ C)	-20 ~ +70
9	Storage Temperature ( $^{\circ}$ C)	-30 ~ +80
10	Weight (g)	0.3
11	Case material and colour	LCP / Black

\*Applying rated voltage (Resonant frequency, 1/2 duty, Square wave)

### DIMENSIONS (UNIT: mm)



### TEST METHOD:



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 Elk Grove, IL 60007  
 Toll Free: 800-956-1920 FAX: 847-956-1950  
[www.tusainc.com](http://www.tusainc.com) info@tusainc.com

All dimensions are in MM unless otherwise specified

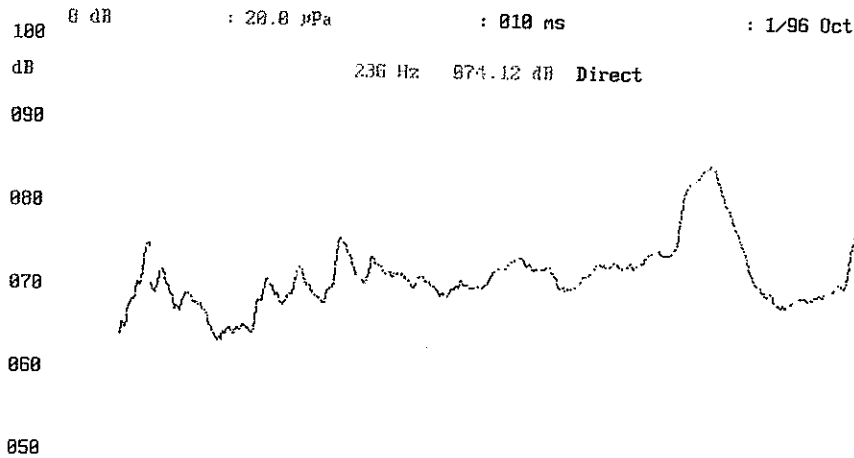
Drawing Number:  
**TRSTE-5030**

Title:  
**SMT Electro Magnetic**  
**1 of 4**

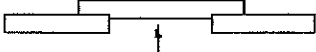
Date:  
**4/16/2008**

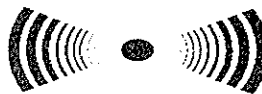
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**FREQUENCY RESPONSE:**



**RELIABLE TEST:**

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is +80°C for 120 hours	After the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be initial value±10dB or more.
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -30°C for 120 hours	
3	Temp. Cycle	Total 5 cycles, 1 cycle consisting of -30±2°C, 30 minutes 20±5°C 15 minutes 80±2°C, 30 minutes 20±5°C 15 minutes	
4	Humidity Test	40±2°C, 90 ~ 95% RH, 120 hours	
5	Vibration Test	The part shall be subjected to a vibration cycle is 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3g). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.	
6	Shock	Sounder shall be measured after being applied shock (980m/s <sup>2</sup> ) for each three mutually perpendicular directions to each of 3 times by half sine wave.	
7	Drop Test	Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.	
8	Lead pull	The part shall be pushed with a force of 9.8N for 10±1 seconds behind the part. 	After the test part shall meet specifications without any degradation in appearance and performance.



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Drawing Number:

**TRSTE-5030**

Title:

**SMT Electro Magnetic  
2 of 4**

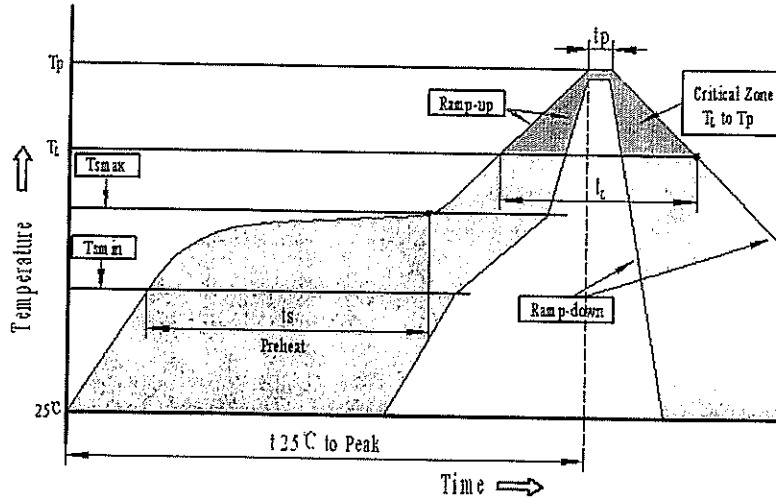
Date:

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Recommended Temp. Profile for Reflow Oven (Fig.1)



Profile Feature	Pb-Free Assembly
Average ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Preheat	
- Temperature Min.( $T_{s_{min}}$ )	150°C
-Temperature Min.( $T_{s_{max}}$ )	200°C
-Temperature Min.( $t_s$ )	60 ~ 180 seconds
$T_{s_{max}}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature( $T_L$ )	217°C
- Time( $T_L$ )	60 ~ 150 seconds

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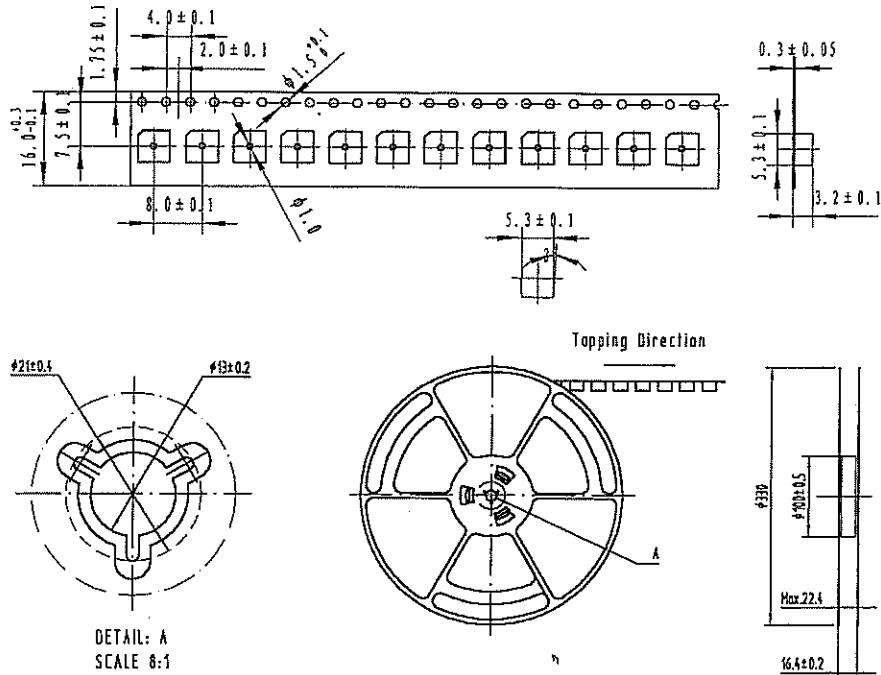
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**TRSTE-5030**

Title:  
**SMT Electro Magnetic  
3 of 4**


Date:  
**4/16/2008**

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**PACKING:**



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<p>All dimensions are in MM unless otherwise specified</p>	
<p>Drawing Number: <b>TRSTE-5030</b></p>	<p>Title: <b>SMT Electro Magnetic 4 of 4</b></p>
<p>Date: <b>4/16/2008</b></p>	<p>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</p>