



Product Specification

Ningbo East Electronics Limited

NO. 88 East Jinhui Road, Yinzhou Ningbo 315100, P.R.China

<http://www.east-mingtao.com>

Product Name:	External -Driven Piezo Transducer
Part Number:	TDM-59DA-7
Version:	1.0
Date:	2020-12-14
Note:	

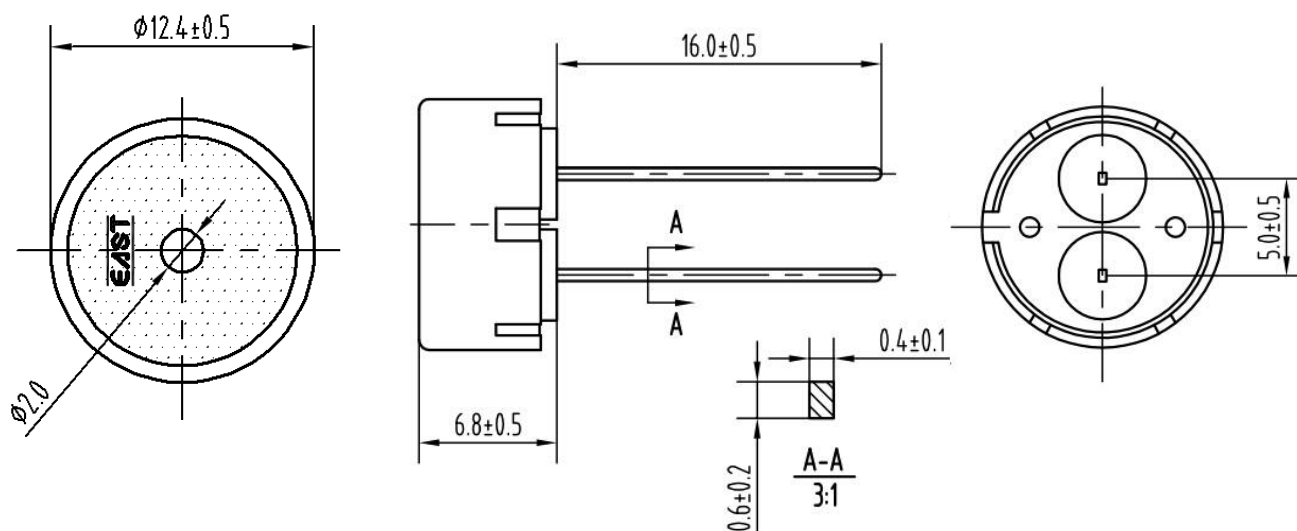
East is an ISO 9001 , IATF16949 and ISO 14001 Certified Company

Revision History

Rev.	Description	Author/Date	Checked By	Approver
1.0	Released	李召毅 2020-12-14	汤礼东	王建成

1. Part Number TDM-59DA-7

2. Dimension Drawing (Unit: mm)



3. Specification

No.	Item	Specification
3-1	Min. Sound Pressure Level	80dB/4.0kHz/5Vp-p square wave /10cm
3-2	Allowed Input Voltage	25Vp-p
3-3	Capacitance	$12 \pm 30\%$ nF (At 100Hz)
3-4	Max. Consumption	8mA/4.0kHz/5Vp-p square wave
3-5	Resonant Frequency	4.0 ± 0.5 kHz
3-6	Operating Temperature	$-20 \sim +70^{\circ}\text{C}$
3-7	Storage Temperature	$-30 \sim +80^{\circ}\text{C}$
3-8	Case Material /Color	PBT/Black
3-9	Weight	0.75g
3-10	Pin Material/Plating	Cu/Sn
3-11	Pin Strength	More than 10N

NOTES:

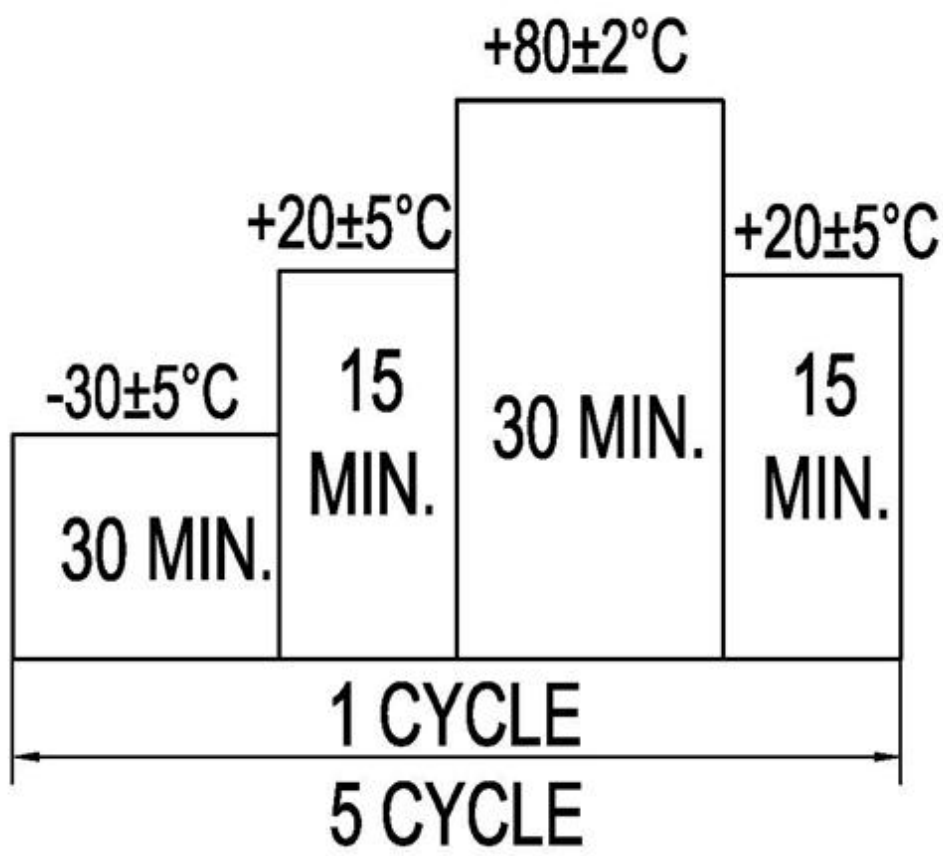
Test should be made under the conditions of room temperature ($20 \pm 10^{\circ}\text{C}$), normal humidity ($60 \pm 20\%$) and normal atmospheric pressure. In this case, however, that the judgment is questionable, the test conditions are to be changed to room temperature $20 \pm 2^{\circ}\text{C}$, relative humidity 60~70% and normal atmospheric pressure

4. Reliability Test

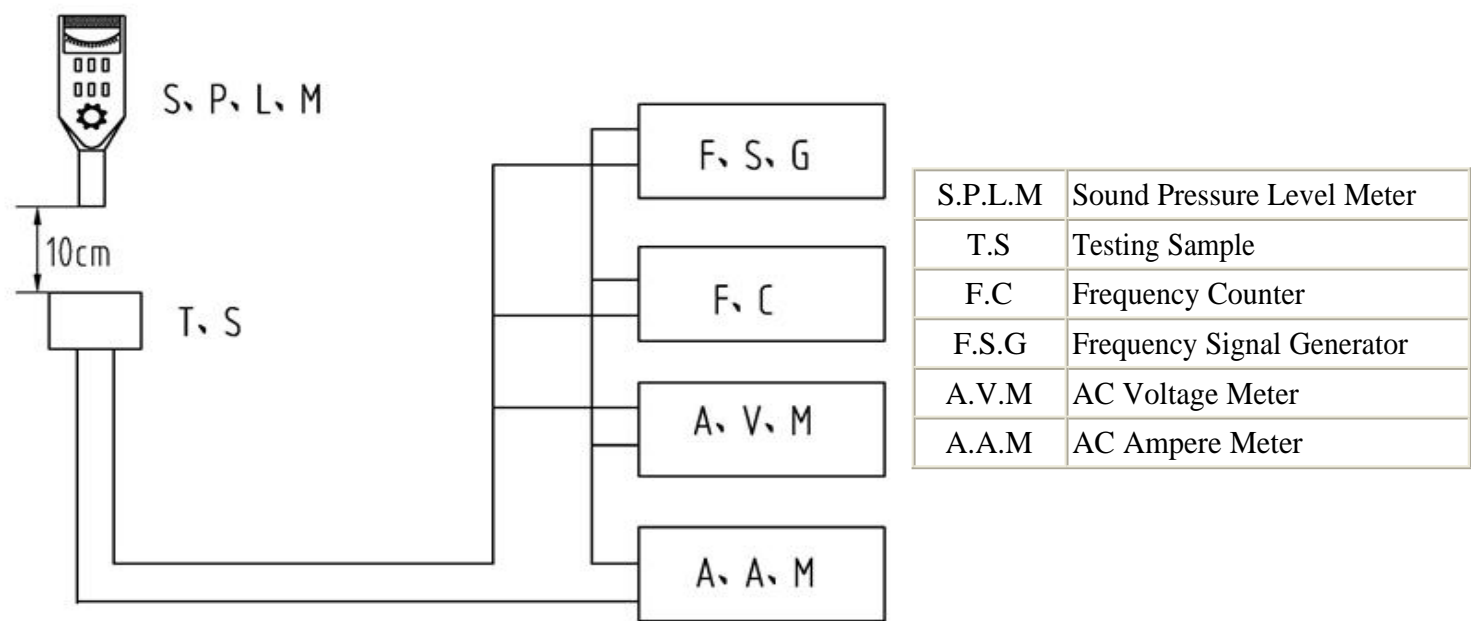
No.	Item	Method of Test	Tolerance after Testing
4-1	Operating Temperature	-20~+70°C	Sound pressure level initial value $\pm 10\text{dB}$ Max. consumption value $\pm 20\%$ Capacitance value $\pm 20\%$
4-2	Storage in high temperature	Storage in +80°C test box 96 hours then exposed to the room temperature for 2 hours	
4-3	Storage in low temperature	Storage in -30°C test box 96 hours then exposed to the room temperature for 2 hours	
4-4	Life test in the room temperature	Operate the product continuously 5 seconds on 5 seconds off 300 hours at rated voltage	
4-5	Temperature / humidity cycle test	Storage in +40°C, 93 \pm 3%RH test box 96 hours then exposed to the room temperature for 2 hours	
4-6	Temperature (high and low) cycle test	Conduct the test for 5 cycles without applying power then expose to the room temperature for 2 hours.(See Figure 4-6)	
4-7	Vibration test	Conduct the test for the directions of X Y and Z for 0.5 hour each (total 1.5 hours). To-and Fri sweep time(from 10 to 55Hz and then 55 to 10) under single amplitude of 0.75mm is 3 minute, then expose to the room temperature for 2 hours	
4-8	Drop test	Drop a product naturally from the height of 700mm onto the surface of 100mm thick wooden board. Two directions: upper and side of the product are to be applied for this drop test once respectively	
4-9	Soldering heat resistance test	Dip the connecting pins in soldering at 260 \pm 5°C for 10 \pm 1 seconds	
4-10	Test of soldering	Dip the connecting pins in soldering at 230 \pm 5°C for 3 \pm 0.5 seconds	Solder shall be attached around over 95% of the dipped portion

NOTE: The pins are allowed to deform after drop test.

Figure 4-6



5. Electrical Testing Method



6. Packing Information

No.	Item	Description
6-1	Tape type information	a) The design for such tape packing was executed under standard IEC - 286-3 b) The material of the tape is paper . Detailed dimensions are as below: (See Figure6-1)
6-2	Packing dimensions	a) The tape is put into a 300X330X50mm inner packing box and is packed with 500pcs of transducer per plate. b) The dimension of the outer carton is 610X 350X 280mm containing 10 inner boxes with a total quantity of 5000 pcs of transducer.(See Figure6-2)

Figure 6-1 (Unit: mm)

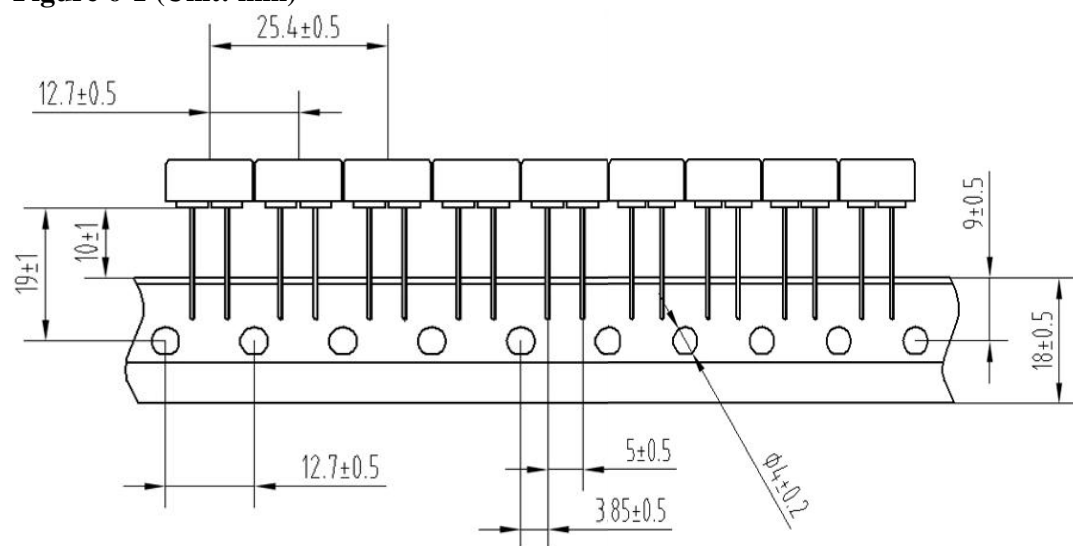
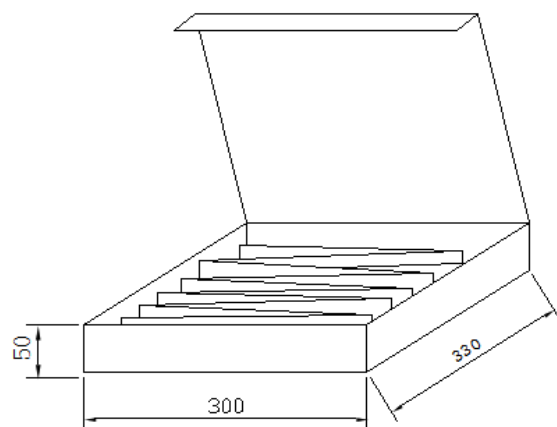


Figure 6-2 (Unit: mm)

Inner packing box



Outer carton

