



请承认书

Version No.: V2.0

常州昊翔电子有限公司
Changzhou HaoXiang Electronic Co., LTD

客户名称

CUSTOMER NAMED : _____

产品名称

COMMODITY : Ultrasonic Sensor

产品型号

MODEL NO : TDA-T1612-25P-AO

客户料号

PART NO : _____

审核	秦皓	主办	潘莲 Sept.17,2020
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客户承认栏			
承认		拒收	

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A. MODEL: TDA-T1612-25P-AO

B. SPECIFICATION

No.	Item	Specification	Condition
1	Structure	Open	
2	Using Method	Transmitter	
3	Nominal Frequency	25±2KHz	
4	Transmitting Sound Pressure Level	Min. 110dB	at 25KHz (0dB=0.02mPa) See Fig.1 (10V/30cm/sine wave)
5	Receive Sensitivity	----	at 25KHz (0dB=V/Pa) See Fig.2
6	Capacitance	2400 ± 30%pF	at 1kHz
7	Directivity	80deg	
8	Allowable input voltage	30Vp-p	
9	Operating temperature	-30°C~+70°C	
10	Material	Aluminium	
11	Terminal	Pin Type	See appearance drawing
12	Environmental Protection Regulation	RoHS	

C. MECHANICAL AND VIBRATION TEST

No.	Item	Test condition	Evaluation standard
1	Shock Test	Acceleration : sine 980 m/s ² (100G) Direction : 3 directions Shock time : 3 times / directions	The variation of the Sound Pressure Level at 25kHz is within 3dB compared with initial figures at 25 degC after following test conditions
2	Vibration Test	Vibration frequency : 10 to 70 Hz Sweep Period : 5 min. Acceleration : 43.12 m/s ² (4.4G) Directions : 3 directions Time : 50 min. / direction	The variation of the S.P.L at 25kHz is within 3dB compared with initial figures at 25 degC after following test conditions
3	Drop Test	Height : 1 meter onto concrete floor Times : 10 times	The variation of the S.P.L at 25kHz is within 6dB compared with initial figures at 25 degC after following test conditions
4	Pull Strength	There should be no substantial damage after 2.45 N of force.	No interference in operation

D. ENVIRONMENTAL TEST

No.	Item	Condition	Evaluation standard
1	High Temperature	After being placed in a chamber at $+70 \pm 3$ degC for 36 hours.	The variation of the S.P.L at 25kHz is within 3dB compared with initial figures at 25 degC in 24 hours after following test conditions
2	Low Temperature	After being placed in a chamber at -30 ± 3 degC for 36 hours.	
3	Humidity	After being placed in a chamber at $+60 \pm 3$ degC and $90 \pm 5\%$ relative humidity for 36 hours.	The variation of the S.P.L at 25kHz is within 6dB compared with initial figures at 25 degC in 24hours after following test conditions
4	Temperature Cycle test	Temperature : $+70 \pm 3$ degC, 1 hour -30 ± 3 degC, 1 hour Cycles : 10 cycles	

TEST CONDITION

Standard Test Condition : a) Temperature : $+5 \sim +35^{\circ}\text{C}$ b) Humidity : 45-85% c) Pressure : 860-1060mbar

Judgment Test Condition: a) Temperature : $+25 \pm 2^{\circ}\text{C}$ b) Humidity : 60-70% c) Pressure : 860-1060mbar

E. MEASURING METHOD(SPEAKER MODE)

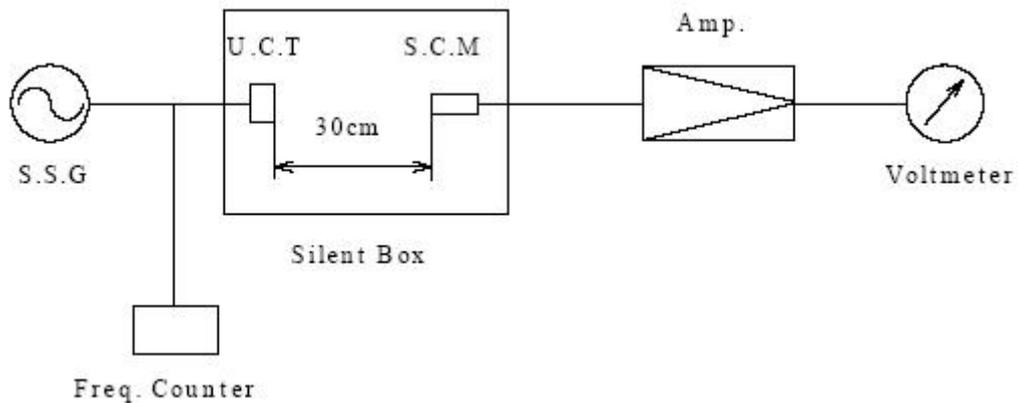


Fig.1 (transmitter)

S.S.G : Sine wave Signal Generator

U.C.T : Ultrasonic Ceramic Transducer

S.C.M : Standard Condenser Microphone (Brüel & Kjør 4135)

Amp. : Amplifier (Brüel & Kjør 2610)

Input Vol. : 10Vr.m.s.

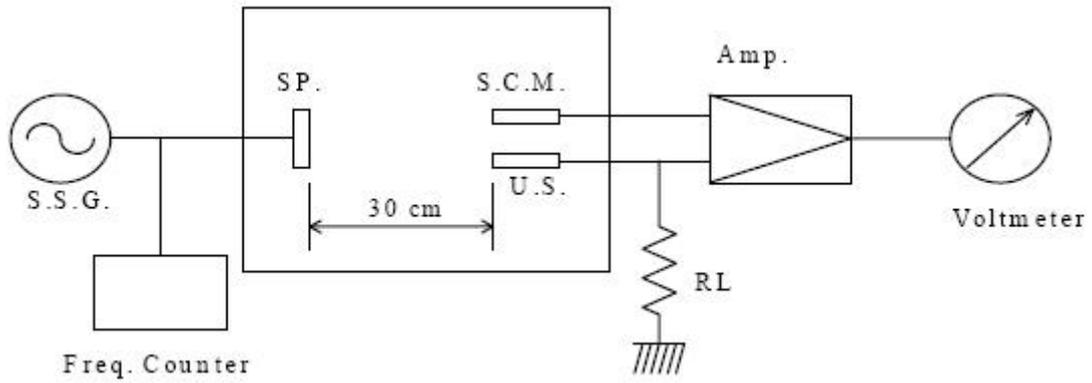
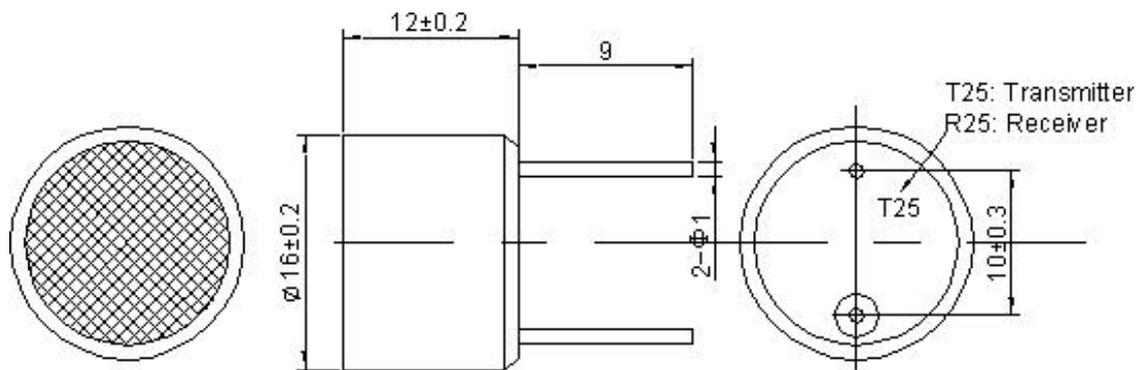


Fig.2 (receiver)

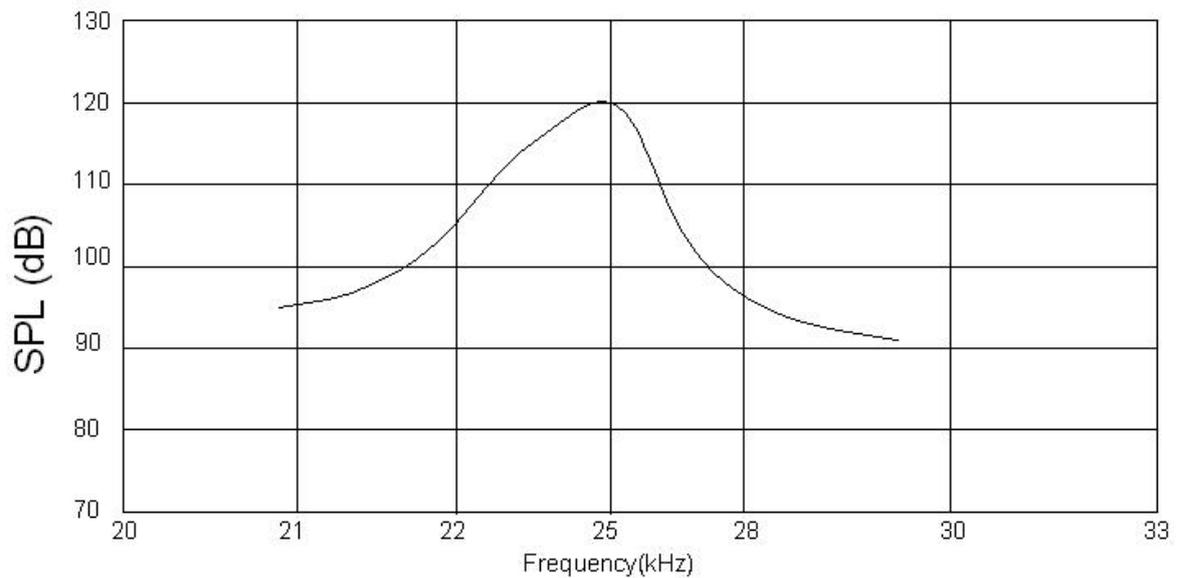
- S.S.G : Sine wave Signal Generator
- U.C.T : Ultrasonic Ceramic Transducer
- S.C.M : Standard Condenser Microphone (Brüel & Kjær 4135)
- Amp. : Amplifier (Brüel & Kjær 2610)
- SP. : Tweeter (S.P.L 94dB)
- RL : $3.9\text{ k}\Omega$

F. APPEARANCE DRAWING



Unit: mm Tolerance: $\pm 0.5\text{mm}$

G. FREQUENCY CURVE



Frequency Characteristics

