

# ILOSAM ELECTRONICS CO., LTD.

## XY-14

### FEATURES:

Case: Black MPP0

Pin: Tin-Plated Copper

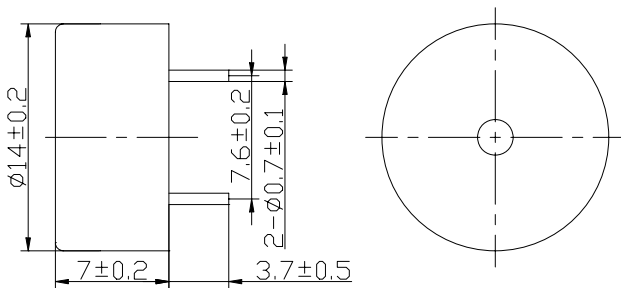
### SPECIFICATIONS:

TYPE	UNIT	XY-14
◆ Min. Sound Output at 10 cm	dB	80
Rated Voltage	V <sub>p-p</sub>	5
Operating Voltage	V <sub>p-p</sub>	1~20
Resonant Frequency	Hz	4000 ± 500
◆ Max. Current Consumption	mA	2
Capacitance at 1000Hz	pF	12000 ± 30%
Operating Temperature	°C	-20~+70
Storage Temperature	°C	-30~+80
Weight	g	2

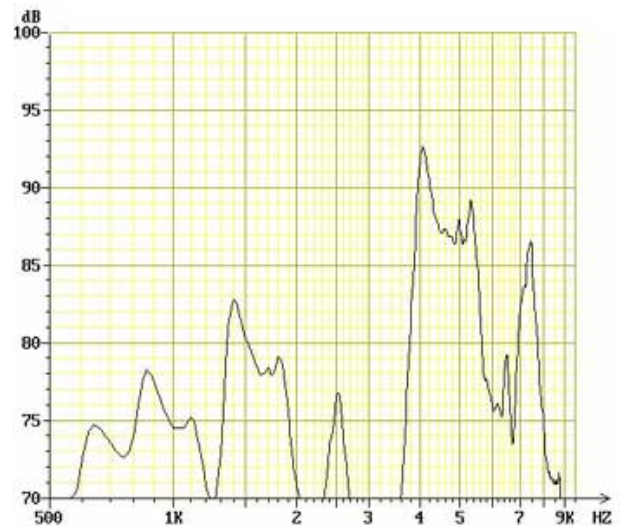
◆ Value applying at rated voltage

### DIMENSIONS :

(Unit: mm)



### FREQUENCY RESPONSE:



Address : Chung-Ang Circulation complex(GA-Dong/3428) #1258 Kurobon-Dong Kuro-Gu SEOUL KOREA

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# SPECIFICATION SHEET

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**CUSTOMER:**

**PRODUCT: PIEZO TRANSDUCER**

**MODEL NUMBER: XY-14**

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**ILOSAM**

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**ELECTRONICS CO., LTD.**

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**1.SPECIFICATIONS****XY-14**

<b>ITEMS</b>	<b>SPECIFICATIONS</b>	<b>CONDITIONS</b>
<b>RATED VOLTAGE</b>	<b>5Vp-p/4.0KHz</b>	
<b>MAX.ALLOWABLE INPUT VOLTAGE</b>	<b>20Vp-p</b>	
<b>RATED CURRENT</b>	<b>LESS THAN 2mA/5Vp-p/4.0KHz</b>	<b>APPLYING RATED VOLTAGE</b>
<b>CAPACITANCE</b>	<b>12000 ± 30%pF</b>	
<b>TONE NATURE</b>	<b>SINGLE</b>	
<b>SOUND OUTPUT</b>	<b>MORE THAN 80dB</b>	<b>MIN.SOUND PRESSURE LEVEL AT 10CM/4.0KHz/9Vp-p SQUARE WAVE</b>
<b>FREQUENCY</b>	<b>4000 ± 500Hz</b>	<b>MEASURING AT THE RATED VOLTAGE</b>
<b>PIN STRENGTH</b>	<b>MORE THAN 1Kg</b>	
<b>OPERATING TEMPERATURE</b>	<b>-30 ~ +85°C</b>	
<b>DIMENSION</b>	<b>SEE FIG. 1 ATTACHED</b>	
<b>APPEARANCE</b>		<b>THERE SHOULD BE NO REMARKABLE STAINS, RUSTS OR FLAWS.</b>

**NOTE:**

**TEST SHOULD BE MADE UNDER THE CONDITIONS OF ROOM TEMPERATURE (20 ± 10 °C ), HUMIDITY (60 ± 20%) AND NORMAL ATMOSPHERIC PRESSURE. IN THE CASE, HOWEVER, THAT THE JUDGMENT IS QUESTIONABLE, THE TEST CONDITIONS ARE TO BE CHANGED TO ROOM TEMPERATURE 20 ± 2 °C , RELATIVE HUMIDITY 60-70% AND NORMAL ATMOSPHERIC PRESSURE.**

## 2. INSPECTION STANDARD

## XY-14

ITEM TESTED	SYM	STANDARD	AQL	LEVEL	INSPECTION BY MEANS OF	REMARKS
NO SOUNDING		5V <sub>p-p</sub> /4.0KHz	0.25	II	EARS	AT EACH 1V <sub>p-p</sub> , 5V <sub>p-p</sub> , 20V <sub>p-p</sub> /4.0KHz THERE SHOULD BE NO NONSOUNDING, HARSH SOUND
SOUND OUTPUT		MORE THAN 80dB WHEN APPLYING RATED VOLTAGE	1	II	SOUND PRESSURE LEVEL METER	MIN. SOUND PRESSURE LEVEL AT 10CM/4KHz/5V <sub>p-p</sub> SQUARE WAVE
CURRENT		LESS THAN 2mA WHEN APPLYING RATED VOLTAGE	0.65	I	MULTIMETER	
CAPACITANCE		12000 ± 30% pF	0.65	I	LC METER	
BASIC FREQUENCY		4000 ± 500Hz	1	II		
OUTER DIAMETER	A	Φ 14.0 ± 0.2	1.5	S-3	ELECTRONICS CALIPERS	TO BE MEASURED AT THE MAXIMUM DIAMETER
OVERALL HEIGHT	B	7.0 ± 0.2				TO BE MEASURED AT THE FOOT OF THE PINS
PIN'S LENGTH	C	3.7 ± 0.5				
PIN'S PITCH	D	7.6 ± 0.2				
PIN'S DIAMETER	E	0.7 ± 0.1				
PIN'S STRENGTH		MORE THAN 1KG	0.65	S-3	TENSION GAUGE	BY PULLING EACH PIN
STATE OF SOLDER			1	II	MAGNIFYING GLASS	SOLDERED POINTS AND /OR COIL DISPOSITION SHOULD BE PROPER. (CROSSED COIL WIRE ARE NOT ACCEPTED)
RUST			1	II	EYES	ANY RUST SHOULD NOT BE ACCEPTED
STAIN			1.5	II	EYES	THERE SHOULD BE NO REMARKBLE STAINS
ADHESION			1.5	II	EYES	ADHESION SHOULD BE MADE SUFFICIENTLY AND THERE SHOULD BE NO OUTFLOW OF ADHESIVE AGENT.
OTHER APPEARANCE			1.5	II	EYES	

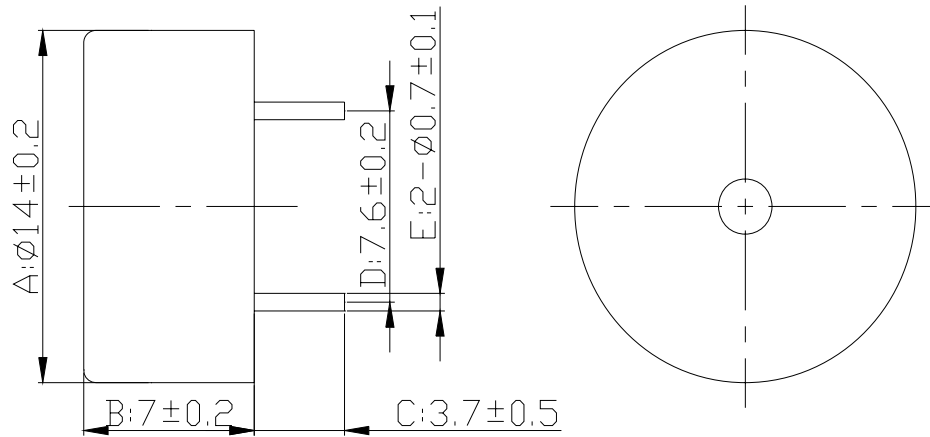
### 3. RELIABILITY TEST

### XY-14

ITEM	METHOD OF TEST	STANDARD
OPERATING TEMP.	-20 ~ +60°C	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST
STORAGE IN HIGH TEMP.	STORAGE IN 70°C TEST BOX FOR 96 HOURS THEN EXPOSE TO THE ROOM TEMP. FOR 2 HOURS.	
STORAGE IN LOW TEMP	STORAGE IN -30°C TEST BOX FOR 96 HOURS THEN EXPOSE TO THE ROOM TEMP. FOR 2 HOURS.	
LIFE TEST IN THE ROOM TEMP	OPERATE THE TRANSDUCER CONTINUOUSLY AT 5 SECONDS ON AND 5 SECONDS OFF FOR 500 HOURS AT RATED VOLTAGE.	
TEMPCYCLE TEST	MAKE THE TEST FOR 5 CYCLES WITHOUT APPLYING POWER AS FIG.3, THEN EXPOSE TO THE ROOM TEMP. FOR 2 HOURS.	
TEMP/HUMIDITY CYCLE TEST	MAKE THE TEST FOR 10 CYCLES WITHOUT APPLYING POWER AS FIG.4, THEN EXPOSE TO THE ROOM TEMP. FOR 2 HOURS	
VIBRATION TEST	MAKE THE TEST FOR THE DIRECTIONS OF X,Y,AND Z FOR 0.5 HOURS EACH (1.5 HOURS) TO-AND-FRO SWEEP TIME (FROM 10Hz TO 55 Hz AND THEN FROM 55Hz TO 10Hz) UNDER SINGLE AMPLITUDE OF 0.75mm IS 1 MINUTE.	
DROP TEST	DROP A TRANSDUCER NATURALLY FROM THE HEIGHT OF 700mm ONTO SURFACE OF 10mm THICK WOODEN BOARD. TWO DIRECTIONS: THE UPPER AND SIDE OF THE TRANSDUCER ARE TO BE APPLIED FOR THIS DROP TEST RESPECTIVELY ONCE.	

**DIMENSION**  
**(UNIT: mm)**  
**PART NUMBER: XY-14**

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NOTE:

PLEASE SEE A. B. C. D. E. IN THE SECOND VOLUME “SYM” IN PAGE 2

FIG. 1

# FREQUENCY RESPONSE (typical curve of type XY-14)

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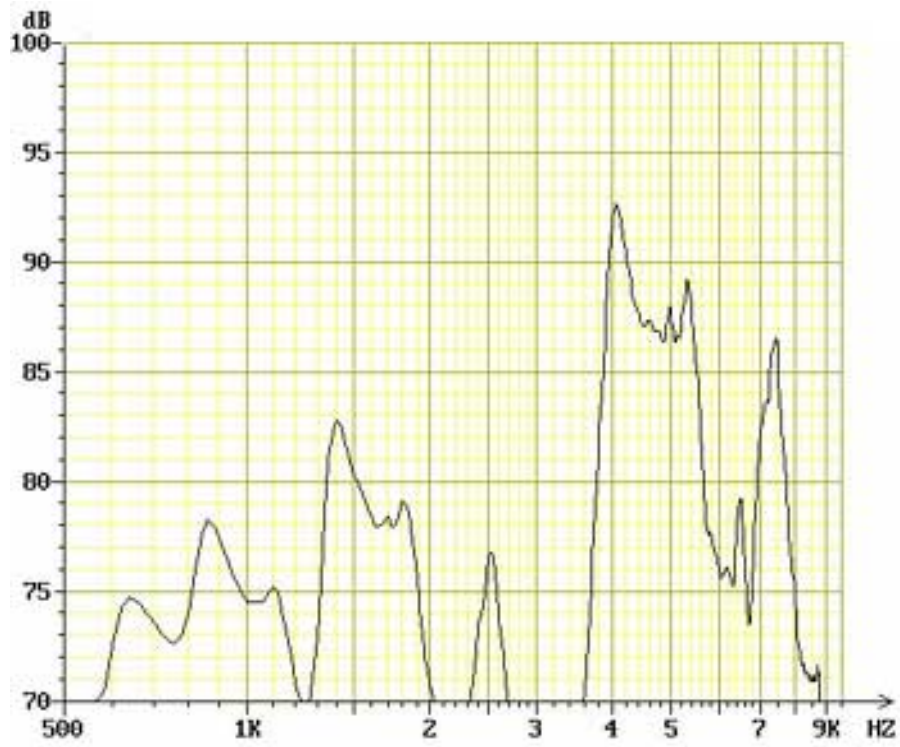


FIG. 2

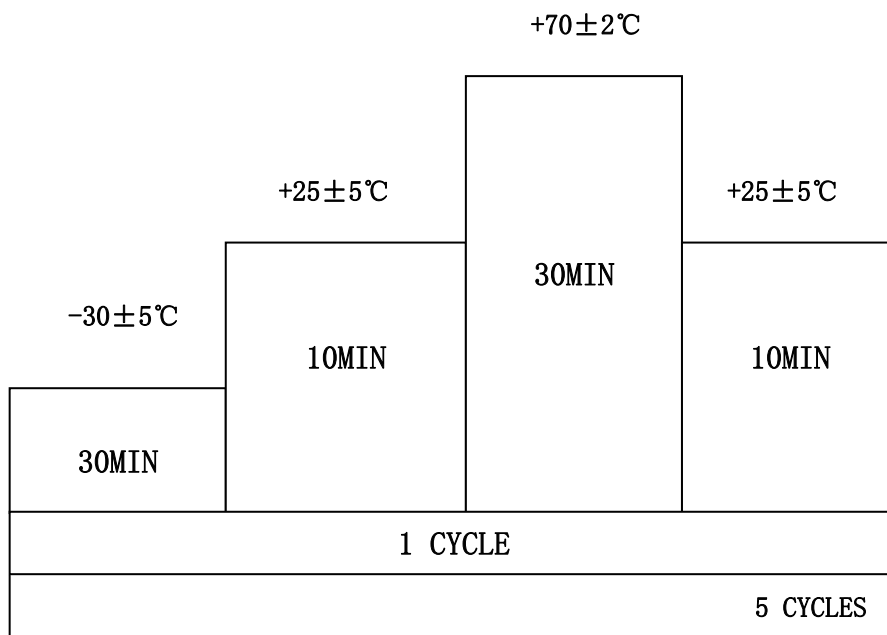


FIG. 3

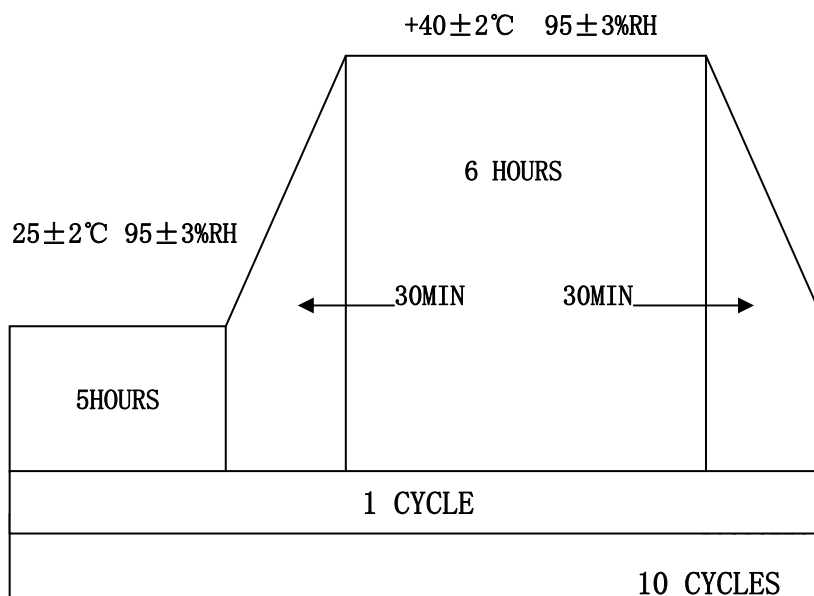
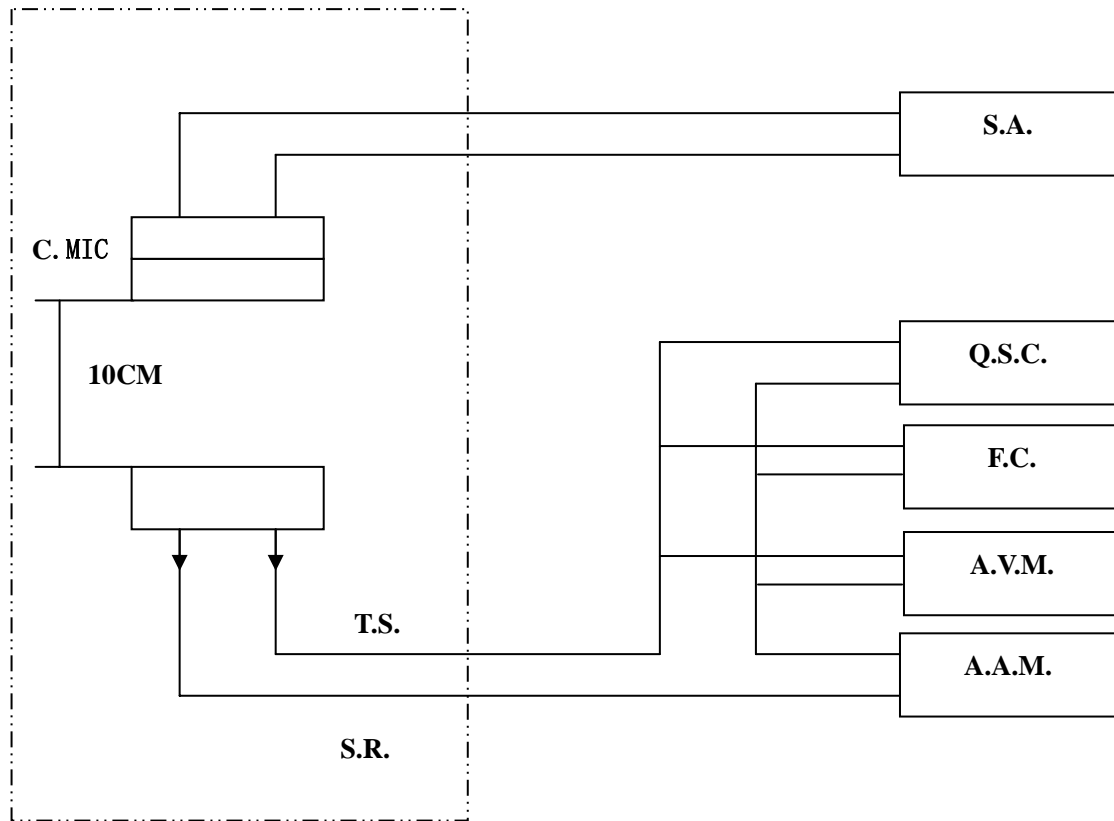


FIG. 4



# ELECTRICAL CHARACTERISTIC TEST METHOD



- S.A. :SPECTRUM ANALYAER
- F.C :FREQUENCY COUNTER
- A.A.M. :AC AMPERE METER
- S.R. :SOUNDPROOF ROOM
- A.V.M. :AC VOLT. METER
- T.S. :TESTING SAMPLE
- C.MIC :CONDENSER MIC
- Q.S.C. :OSCILLATOR

FIG.5