

MESSRS.**SPECIFICATION FOR APPROVAL****承 认 书**

Product	PIEZO BUZZER
Part No.	HZ-2441E-C2 (RoHS)
Customer Approval	

Approved By	Checked By	Made By
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EDITION:1.1

1. Specifications

HZ-2441E-C2 (RoHS)

Items		Units	Specifications	Conditions
01	Rated Voltage	Vp-p	10	(square wave)
02	Operating Voltage	Vp-p	3 ~ 30	
03	Rated Current	mA(Max)	12	
04	Sound Output	dBA(Min)	90	Rated Voltage , Rated Frequency / distance 10cm
05	Resonant Frequency	Hz	4100±500	
06	Capacitance	pF	25000 ±30%	At 1KHz/1V
07	Operating Temp.	°C	-30 ~ +85	
08	Storage Temp.	°C	-40 ~ +95	
09	Weight	g	2.3	

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

2. Measuring Method

2-1. Test Condition

STANDARD

Temperature : 15 ~ 35℃

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

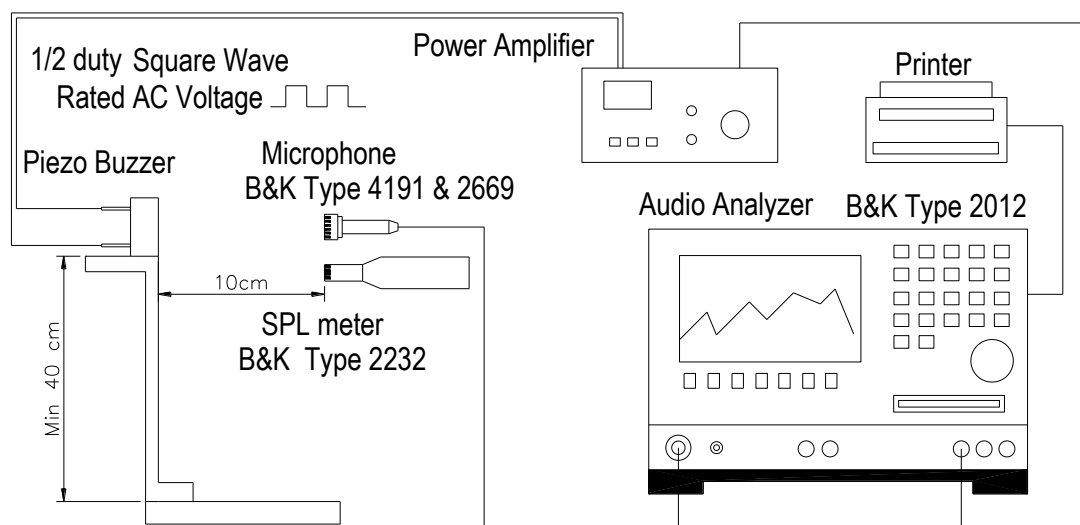
JUDGEMENT

Temperature : 20±3℃

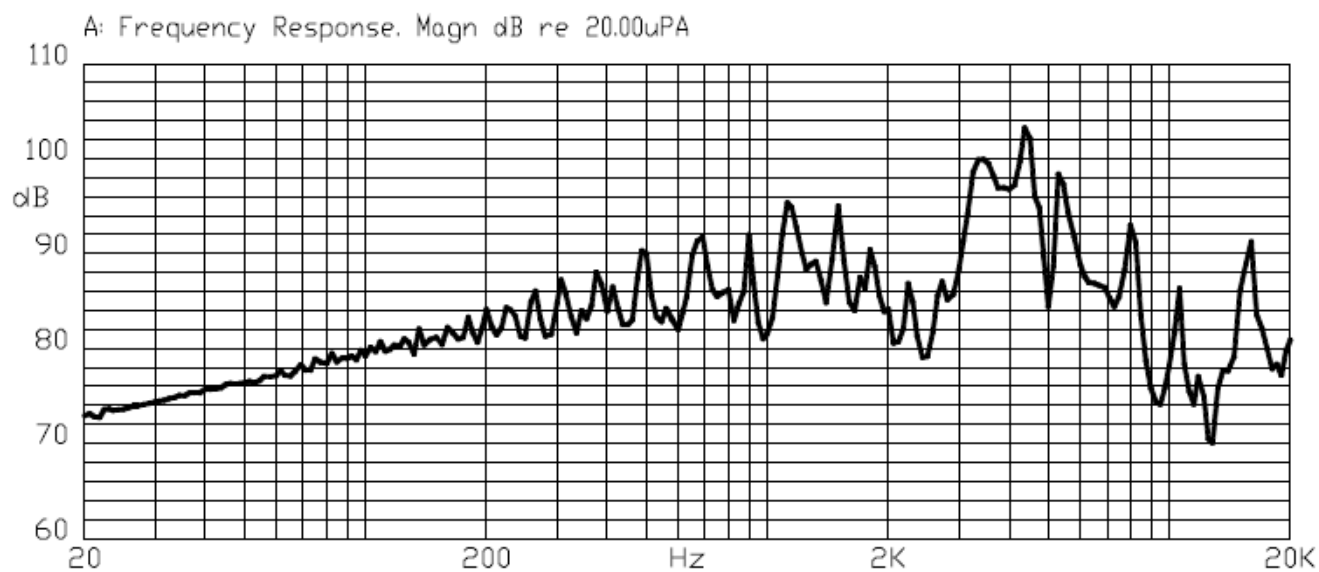
Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

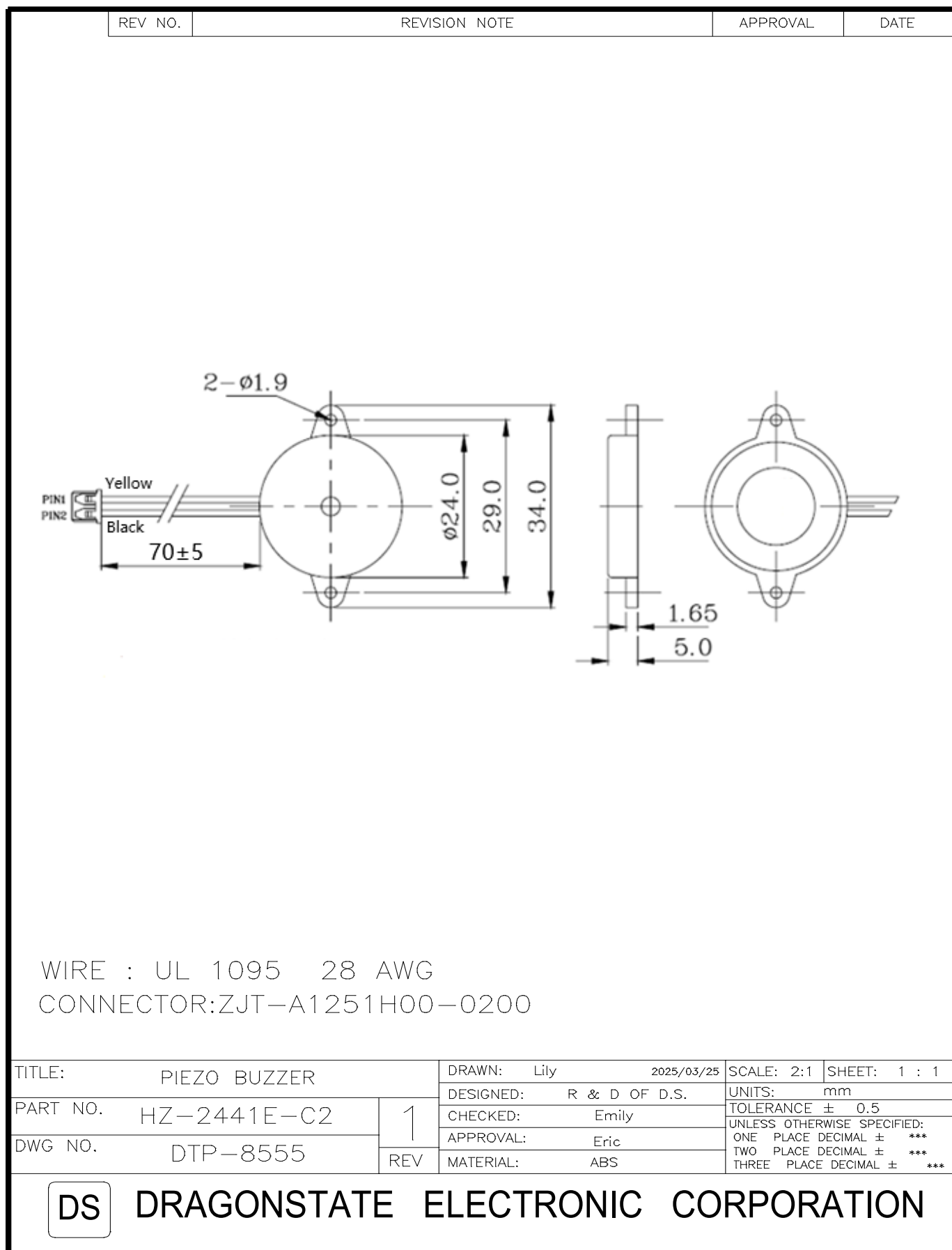
2-2. Standard Test Fixture



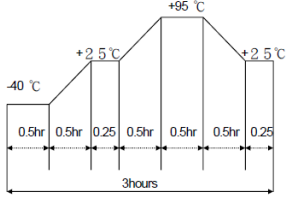
2-3. Frequency Response Curve



3.Dimension



4. Reliability Test

Item		Test conditions	Evaluation standard
01	High temp.Storage life	The part shall be capable of withstanding a storage Temperature of 95℃ for 240 hours.	Being placed for 4 hours at +25℃, buzzer shall be measured. the value of oscillation frequency/current consumption should be in ±10Db compared with initial one
02	Low temp.Storage life	The part shall be capable of withstanding a storage Temperature of -40℃ for 240 hours.	
03	Temp. cycle	The part shall be subjected 5 cycles. One cycle shall consist of; 	
04	Temp./Humidity cycle	The part shall be subjected with 90~95% R.H at +40℃ for 240 hours.	
05	Free drop	The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times).	The value of oscillation frequency/current consumption Should be in ±10% compared with initial ones, The SPL should be in ±10Db compared with initial one
06	Vibration	The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.5mm. The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.	
07	Solderability	Stripped wires of lead wires are immersed in rosin 5 seconds and then immersed in solder bath of +230±5℃ for 3±0.5 seconds	90% min. stripped wires shall be wet solder (Except the edge of terminal)
08	Soldering Heat Resistance	Stripped wires are immersed up to 1.5mm from insulation in solder bath of +300±5℃ for 3±0.5 seconds or +260±5℃ for 10±1 seconds, and then solder shall be measured after being placed in natural condition for 4 hours	No interference in operation
09	Lead Wire Pull Strength	The Pull force shall be applied to lead wire: Horizontal: 3.0N Vertical: 2.0N	No damage and cutting off
10	Operating life test	1, Continuous life test 48 hours Continuous operation at +70℃ with rated voltage applied 2, Intermittent life test A duty cycle of 1 minute on, 1 minute off, a minimum of 5000 times at room temp (25±2℃) and rated voltage applied	Being placed for 4 hours at +25℃, buzzer shall be measured. The value of oscillation frequency/current consumption should be in ±10% compared with initial one