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PIEZO BUZZER SPECIFICATIONS

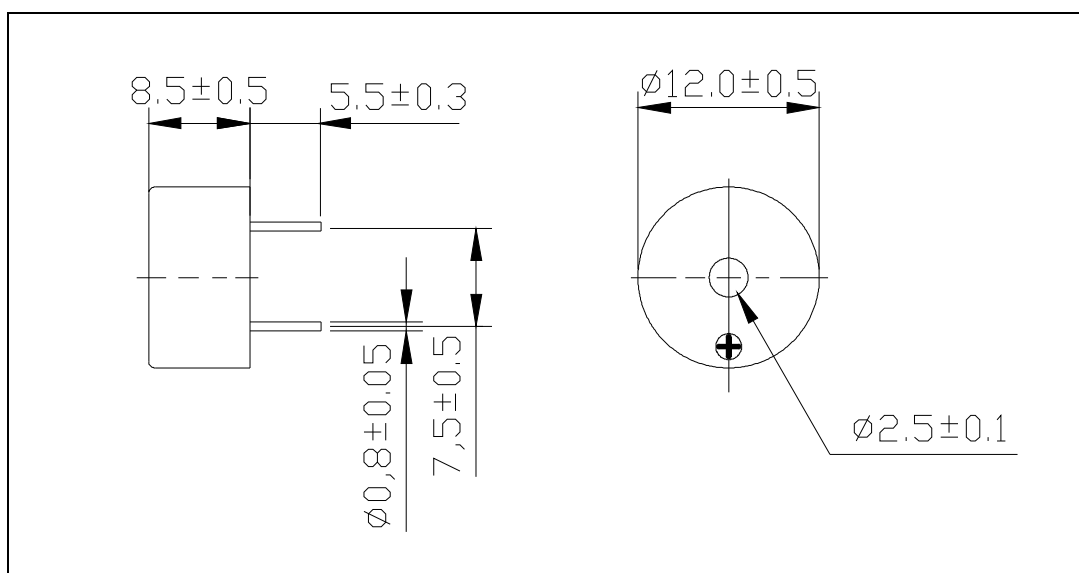
4MODEL: AW4B12TSP-451

NO.FMQ05018

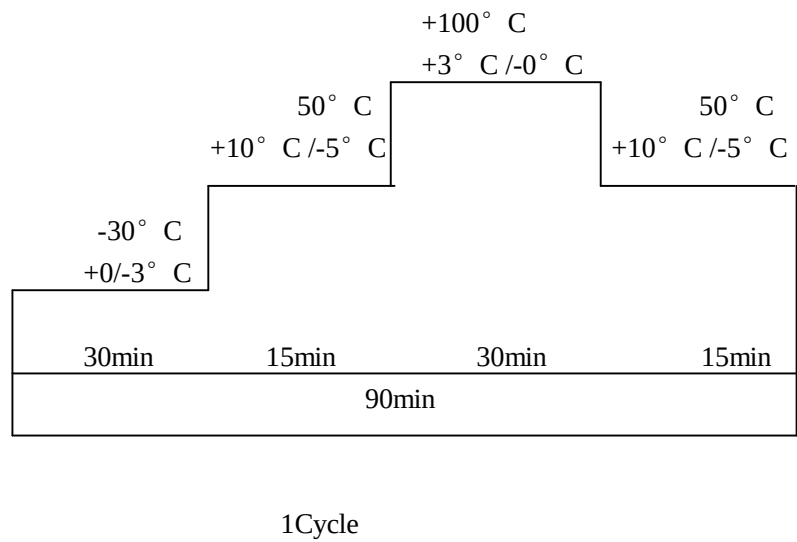
4ELECTRICAL SPECIFICATIONS:

Rated voltage	(VDC)	3
Operating Voltage	(VDC)	3-18
Max. consumption	(mA)	5.0/3VDC
Min. sound pressure level	(dB)	70dB/3VDC/10cm
Resonant frequency	(KHz)	$4.5_{-1.0}^{+0}$ kHz
Operating temperature	(°C)	-20 - +70
Storage temperature	(°C)	-30 - +80
Weight	(g)	1.0
Case material and color		PBT/BLACK
Dimension		See drawing

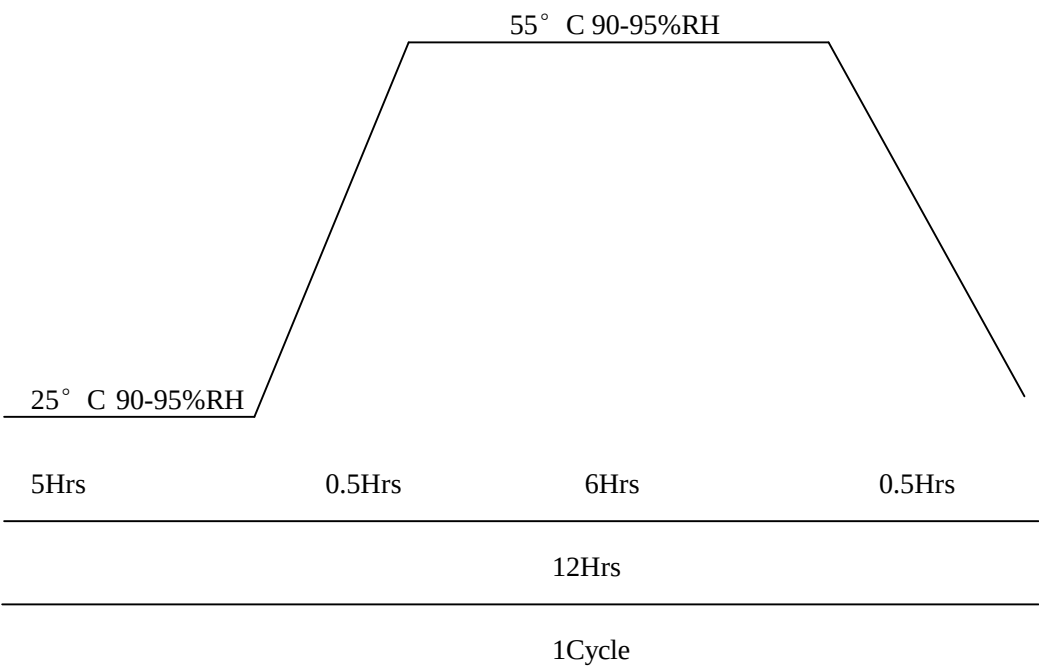
4APPEARANCE AND DIMENSIONS:



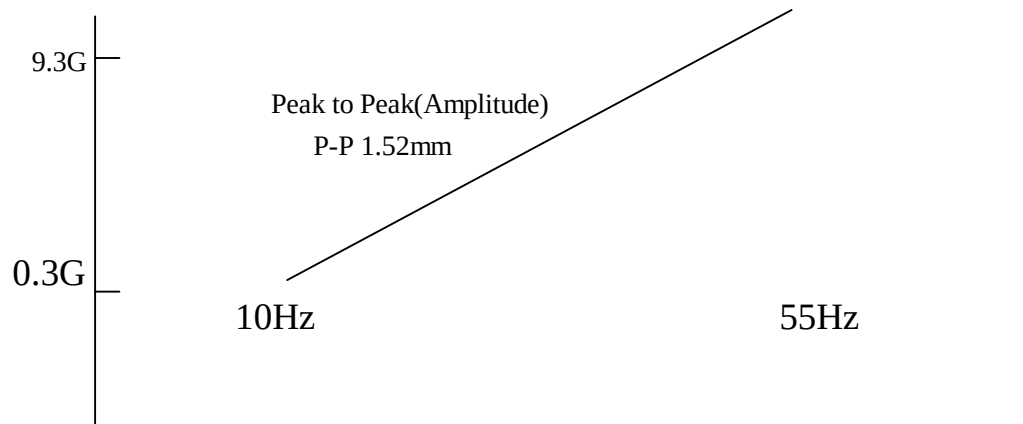
■TEMP. CYCLE TEST



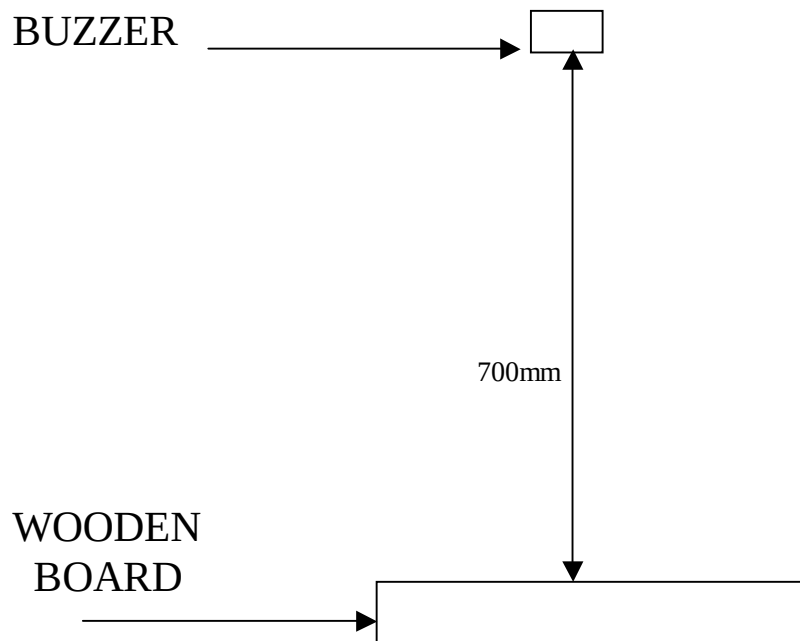
■TEMP. /HUMIDITY CYCLE TEST



■ VIBRATION TEST



■ DROP TEST



■ INSPECTION STANDARD

ITEM TESTED	SYM	STANDARD	AQL	LEVEL	INSPECTION BY MEANS OF	REMARKS
NO SOUNDING		WITHIN THE OPERATING VOLTAGE	0.25	II	EAR	AT EACH LOWEST, RATED ,HIGHEST OPERATING VOLTAGE,THERE SHOULD BE NO SOUNDING,HARSH SOUND AND REMARKABLE SOUND DECREASE AT RATED FREQUENCY SINE WAVE.
SOUND OUTPUT		MORE THAN MINIMUM SOUND OUTPUT 70dBA MENTIONED IN SPECIFICATIONS WHEN APPLYING AT INPUT SIGNAL	0.65	II	SOUND PRESSURE LEVEL	DISTANCE AT MEASURING DISTANCE WITH MOUNTING TO INSPECTION DEVICE IN A STANDARD MANNER (A RANGE)
CURRENT		LESS THAN 5.0mA	0.65	I	MULTIMETER	(0.5 OR 1.0 CLASS) INPUT SIGNAL
RESONANT FREQUENCY		$4.5 \begin{smallmatrix} +0 \\ -1.0 \end{smallmatrix}$	1.50	I	MULTIMETER	AT 1KHz/1V
OUTER DIAMETER	A	12.0 K0.5(mm)	1.50	S-3	ELECTRONIC CALIPERS	TO BE MEASURED AT THE MAXIMUM DIA.
-OVERALL HEIGHT	B	8.5 K0.5(mm)	1.50	S-3	ELECTRONIC CALIPERS	
STATE OF SOLDER			1.00	II	MAGNIFYING CLASS	SOLDERED POINTS AND/OR COIL DISPOSITION SHOULD BE PROPER, (CROSSED COIL WIRES SHOULD NOT BE ACCEPTED.)
RUST			1.00	II	EYE	ANY RUST SHOULD NOT BE ACCEPTED.
STAIN			1.50	II	EYE	THERE SHOULD BE NO REMARKABLE STAINS.
ADHESION			1.50	II	EYE	ADHESION SHOULD BE MADESUFFICIENTLY AND THERE SHOULD BE NO OUTFLOW OF ADHESIVE AGENT
OTHER APPEARANCE			1.50	II	EYE	

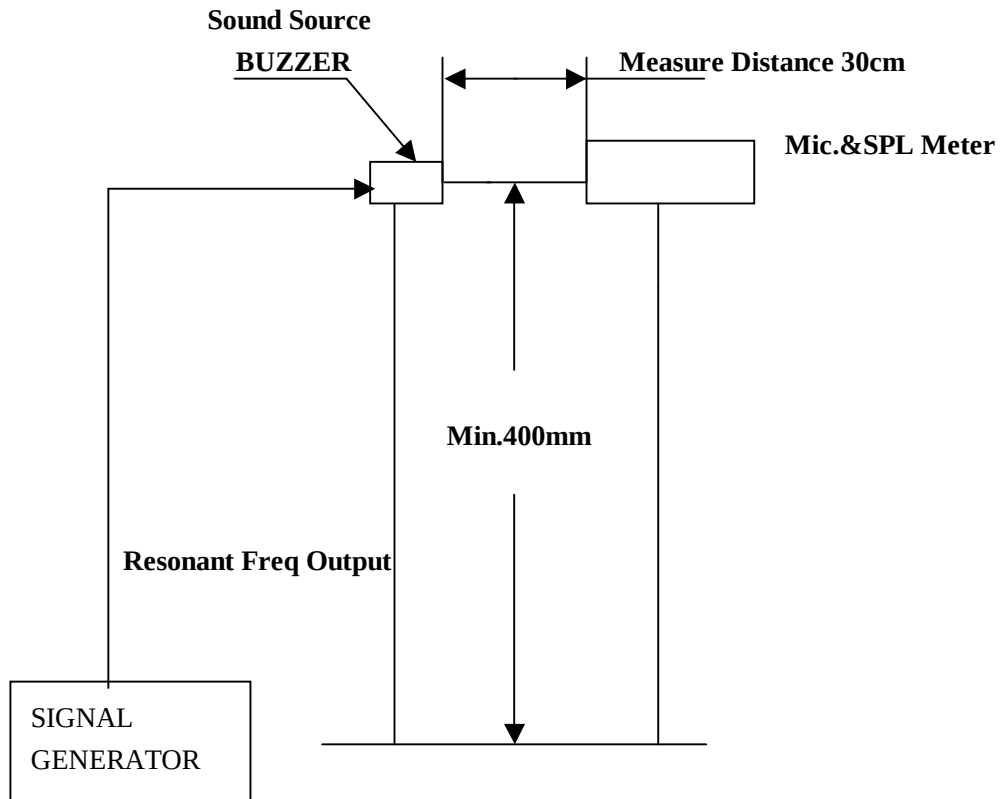
■RELIABILITY TEST

ITEM	METHOD OF THE TEST	STANDARD
1.STORAGE IN HIGH TEMP.	STORAGE IN TEST BOX FOR 96 HOURS UNDER THE HIGHEST OPERATING TEMPERATURE THEN EXPOSE TO THE ROOM TEMP FOR 2 HOURS	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
2.STORAGE IN LOW TEMP.	STORAGE IN TEST BOX FOR 96 HOURS UNDER THE LOWEST OPERATING TEMPERATURE THEN EXPOSE TO THE ROOM TEMP FOR 2 HOURS	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
3.LIFE TEST IN THE ROOM TEMP.	OPERATE THE BUZZER CONTINUOUSLY FOR 1000 HOURS WITH APPLYING AT THE RATED SIGNAL.	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
4.TEMP/HUMIDITY CYCLE TEST	MAKE THE TEST FOR 10 CYCLES WITHOUT APPLYING POWER AS FIG 3 THEN EXPOSE TO THE ROOM TEMP FOR 2 HOURS	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
5.VIBRATION TEST	MAKE THE TEST FOR THE DIRECTIONS OF X, Y, AND Z AS FIG 4 FOR 2 HOURS EACH (TOTAL 6 HOURS) TO-AND-FRO SWEEP TIME (FROM 10 TO 55 Hz AND THEN 55 TO 10) IS 1 MINUTE.	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
6.DROP TEST	DROP A BUZZER NATURALLY FROM THE HEIGHT OF 700mm ONTO THE SURFACE OF 10mm THICK WOODEN BOARD .TWO DIRECTIONS; THAT IS UPPER AND SIDE OF THE BUZZER ARE TO BE APPLIED FOR THIS DROP TEST.	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
7.OPERATING TEMPERATURE	DRIVING FROM THE LOWEST OPERATING TEMPERATURE TO THE HIGHEST OPERATING TEMPERATURE WITHIN 30 MINUTES FOR 2 CYCLES THEN EXPOSE TO THE ROOM TEMP FOR 2 HOURS	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.
8.TEMP CYCLE TEST	MAKE THE TEST FOR 5 CYCLES WITHOUT APPLYING POWER AS FIG 2 THEN EXPOSE TO THE ROOM TEMP FOR 2 HOURS	ALL SPECIFICATIONS MUST BE SATISFIED AFTER THE TEST.

■ TESTING INSTRUMENT LISTING

NAME	MODEL NO.
SOUND LEVEL METER	HS6120
CALIBRATOR	2693B
XY-RECORDER	YOKOGAWA
FREQUENCY GENERATOR	WELLSTAR FG-2102
MULTIMETER	M8900

■ MEASURING METHOD



■ TYPICAL CURVE

Typical Characteristic Curves

