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# MB MECHANICAL BUZZER

**Acoustic Product Specification** 

**Product Number: MB-2317** 



## Release | Revision: B/2018

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Specifications					
Item	Unit	Specification	Condition		
Rated Voltage	VDC	12			
Operating Volt	VDC	8~15			
Mean Current	mA	25 Max.	At rated voltage		
Sound Pressure Level	dB	75	At 20cm at rated voltage		
Rated Frequency	Hz	400 ±100			
Operating Temp	°C	-20 ~ +70			
Storage Temp	°C	-20 ~ +60			
Dimension	mm	23 x 17 x 15	See dimension		
Weight	gram	8.0			
Material		ABS			
Terminal		Wire type	120mm (UL1007/AWG26#)		
Environmental Protection Regulation		RoHS			

#### **Test condition:**

Temperature: +25±2 °C Related humidity: 65±5%

Mechanical Characteristics					
Item	Test condition	<b>Evaluation standard</b>			
Solderability	Stripped wire of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath at +250±5°C for 3 ±0.5 seconds	90% min. lead terminals will be wet with solder (Except the edge of terminal)			
Lead Wire Pull Strength	The pull force will be applied to double lead wire: Horizontal: 3.0N(0.306kg) for 30 seconds. Vertical: 2.0N(0.204kg) for 30 seconds.	No damage and cutting off			
Vibration	The part will be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude will be 1.52mm(9.3G). The vibration test will consist of 2 hours per axis in each three axes (X,Y,Z). A total of 6 hours	The value of oscillation frequency current consumption would be in ±10% compared with initial ones.  The SPL would be in ±10dB compared with			
Drop test	The part only will 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	±10dB compared with initial one.			



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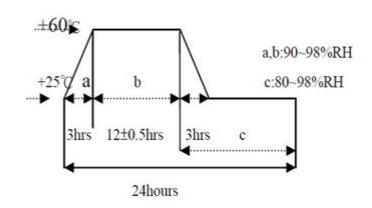
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Environment Test					
Item	Test condition	Evaluation standard			
High temp. test	After being placed in a chamber at +60°C for 96 hours	Being placed for 4 hours at +25°C, buzzer will be measured. The value of oscillation, frequency / current			
Low temp. test	After being placed in a chamber at -20°C for 96 hours				
Thermal shock	The part shall be subjected to 10 cycles. One cycle shall consist of:  -20 c -30 min -30 min -30 min	consumption woulld be in ±10% compared with initial ones. The SPL would be in ±10dB compared with initial one.			

#### Temp cycle test

The part will be subjected to 5 cycles. One cycle shall consist of:



#### **Reliability Test Test condition Evaluation standard** Item Operating life test **Ordinary temperature** After test, the part will The part will be subjected to 96 meet specifications hours at +25±10°C without any High temperature degradation in The part will be subjected to 72 appearance and hours at +60°C with 6.0V performance except SPL, after 4 hours at applied. +25°C. Low temperature The part will be subjected to 72 hours at -10°C with 12.0V The SPL would be applied. in±10dBA compared with initial one. High and Low Voltage Applying 8 voltage and 15 voltage, available time 24 hours each.

#### **Standard test condition:**

a) Temperature: +5~+35°C

**b) Humidity:** 45~85%

c) Pressure: 860~1060mbar



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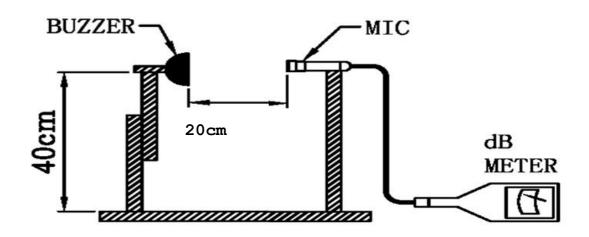
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#### S.P.L Measuring Circuit

Input Signal: 12 VDC



MIC: RION S.P.L meter UC30 or equivalent





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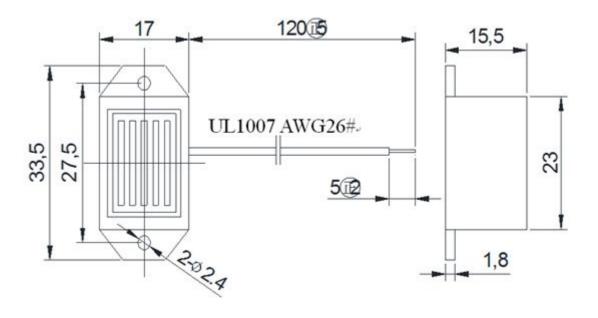
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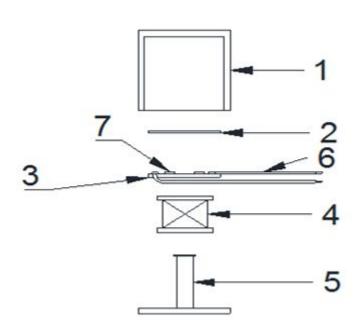
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Tolerance: ±0.5 (unit: mm)





No.	Part Name	Material	Quantity
1	Case	ABS	1
2	Diaphragm	Polyetherimide	1
3	Cover/PCB	Ероху	1
4	Wire	Copper	3
5	Core	Fe	1
6	Wire	UL1007/AWG26#	2
7	Transistor	Epoxy + copper	1

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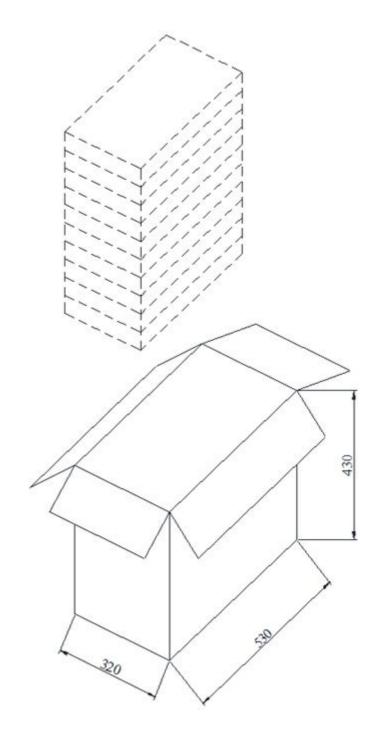
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Details			
	Size (mm)	Quantity (pcs)	
Styrofoam box	510 x 270 x 14	100	
Big box	530 x 320 x 430	1500	