



# TAOGLAS®



## Datasheet

### 78 mm Miniature Speaker – 4 Ohm – IP67

*Part No:*  
SPKM.78.4.B

*Description:*

78mm Miniature Speaker - 4 Ohm 5W RMS – IP67  
Compact design for integration in a wide range of products

*Features:*

4 Ohm Impedance  
Rated Input Power 5W RMS  
Max Input Power 8W peak  
High Sensitivity  
Dimensions:  $\varnothing$ 78 x 27.5mm  
Connector: Wire Lead  
RoHS & Reach Compliant

1.	Introduction	3
2.	Specifications	4
3.	Speaker Measurement Conditions	6
4.	Speaker Characteristics	7
5.	Mechanical Drawing	8
6.	Packaging	9
<hr/>		
	Changelog	10

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

Copyright © Taoglas Ltd.



# 1. Introduction



Featuring a compact design, enabling ease of integration in a wide range of electronics products, including IoT devices, with high levels of long-term reliability and best in class performance Taoglas products are known for.

Our 78 mm Miniature Speake has an IP67 rating, offers 100 Hz - 10 kHz frequency response, 98 dB sensitivity, 4 Ohm impedance, 5W RMS and 8W Peak power handling Proven performance in demanding applications where accurate reproduction of voice communications is required. Taoglas added speakers to our product portfolio to provide both reliable connectivity and high-quality audio solutions from one trusted company.

Please contact your regional Taoglas customer support team for more information or installation guidelines.

## 2. Specifications

<b>Electroacoustic</b>	
Sound Pressure Level	98 dB SPL ( $\pm 3$ dB) @ 1000Hz (0 dB SPL = 20 $\mu$ Pa) Measuring Condition: 0.5W (Sine wave) @ 0.1 m with baffle
Impedance	4 $\Omega$ ( $\pm 15\%$ ) @ 1 kHz with 1 V input signal and without baffle in place
Frequency Response	100 Hz – 10 kHz
Resonant Frequency	500 Hz ( $\pm 15\%$ ) Typical frequency @ 1 V
Nominal Input Power	5 Watts
Maximum Input Power	8 Watts
Distortion	Less than 5% @ 1KHz, with input levels up to 2 V RMS
<b>Mechanical</b>	
Height	27.5 mm
Diameter	78 mm
Weight	0.30 Kg
Connector	Wire leads - AWG#32 (UL1571)
Material	PEI diaphragm with Neodymium Magnet, (without enclosure)
<b>Environmental</b>	
Temperature Range	-10°C to 65°C
Humidity	Non-condensing up to 95% Relative Humidity @ up to 65°C

Reliability Testing		
High Temperature Test	High Temp	+80°C (±2°C)
	Duration	96 Hours
Low Temperature Test	Low Temp	-40°C (±2°C)
	Duration	96 Hours
Heat Shock Test	High Temp	+65°C (±2°C)
	Low Temp	-10°C (±2°C)
	Changeover time	<30 Seconds
	Duration	1 Hour
	Cycle	100 cycles
Humidity Test	Temp	+45°C (±2°C)
	Relative humidity	90 - 95 %
	Duration	96 Hours
Temperature Cycle Test	Temp	-10°C to +65°C
	Duration	24 minutes
	Temperature gradient	1°C to 3°C / minute
	Cycle	25 cycles
Drop Test	Mounted with dummy set mass	100 g
	Height	1 m
	Cycle	6 cycles
Load Test	White noise (EIA filter) for 96 hours @ 0.8 W (2.53 V) input power	
	White noise (EIA filter) for 1 minute @ 1.0 W (2.83 V) input power	

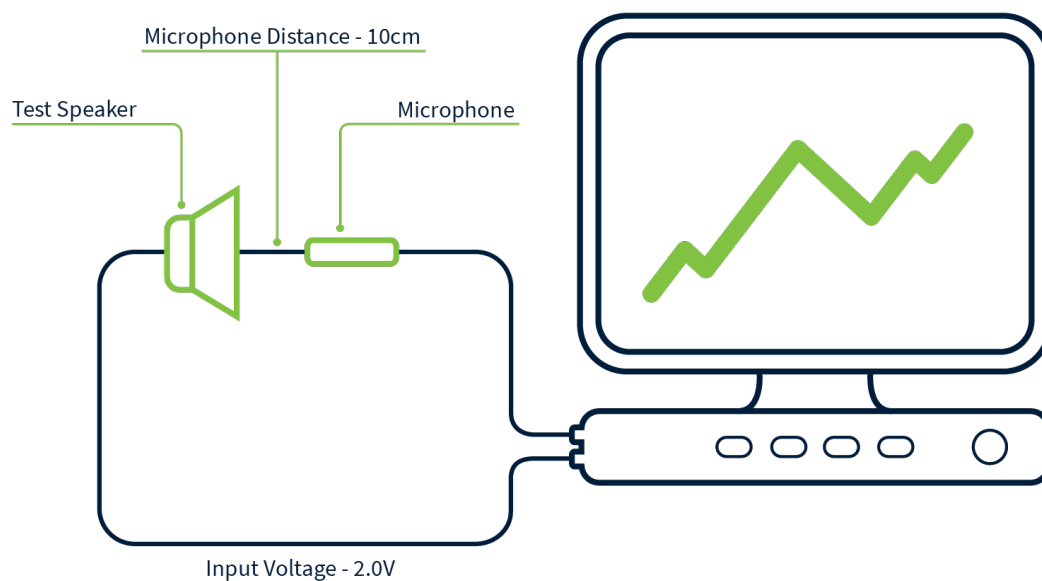
\* SPL (Sound Pressure Level) as specified did not deviate more than ±3 dB from initial value, with no significant damage after testing.

## 3. Speaker Measurement Conditions

### 3.1 Conditions

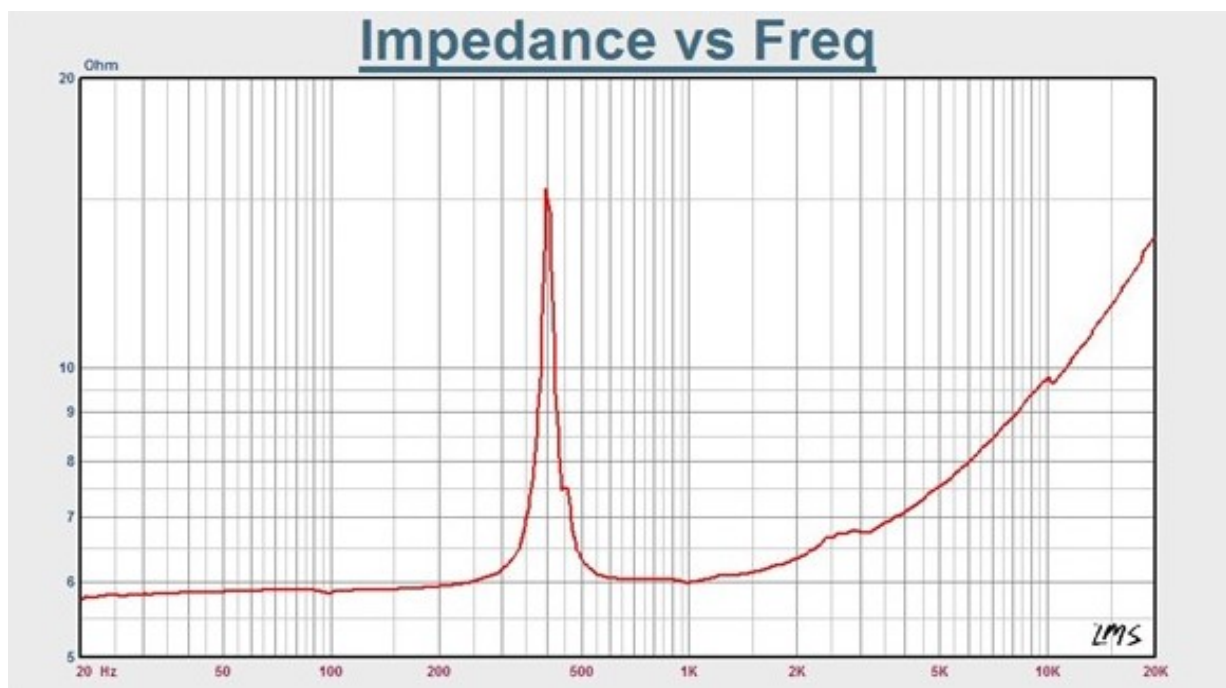
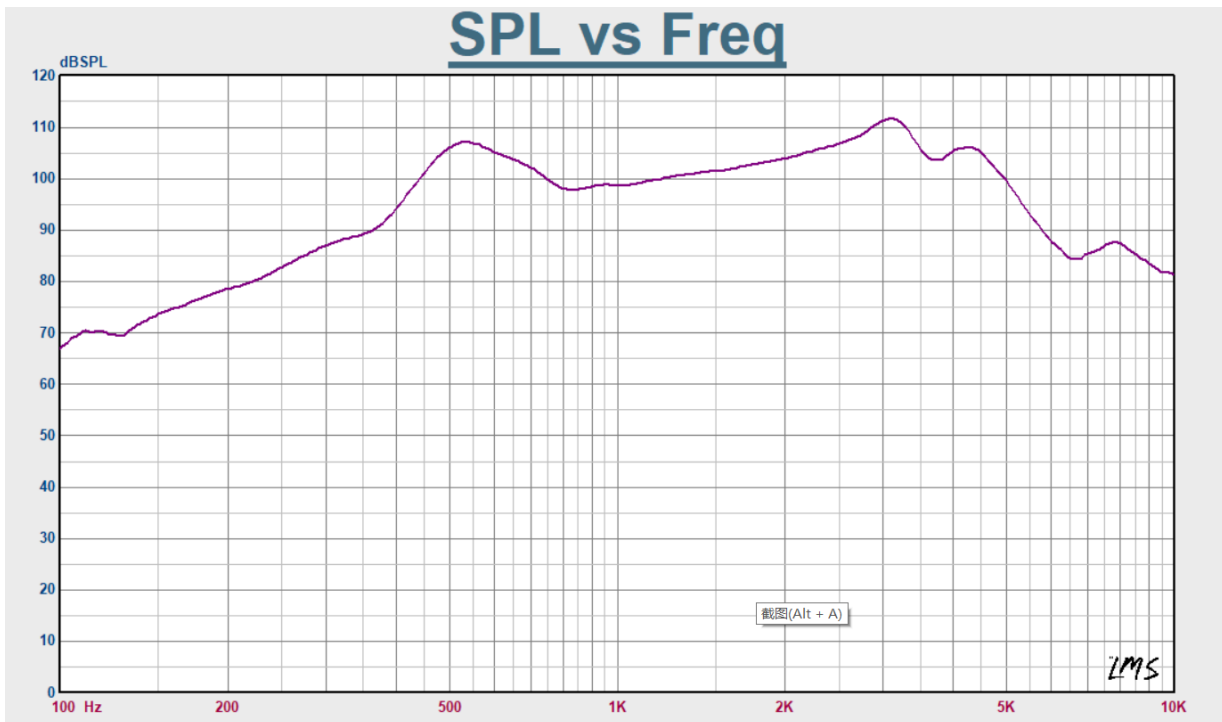
Standard Test Fixture Conditions	
Input Power	0.5 Watts (2 V)
Mode	TSR
Potentiometer Range	50 dB
Sweep Time	0.5 seconds

### 3.2 Measurement Fixture Diagram

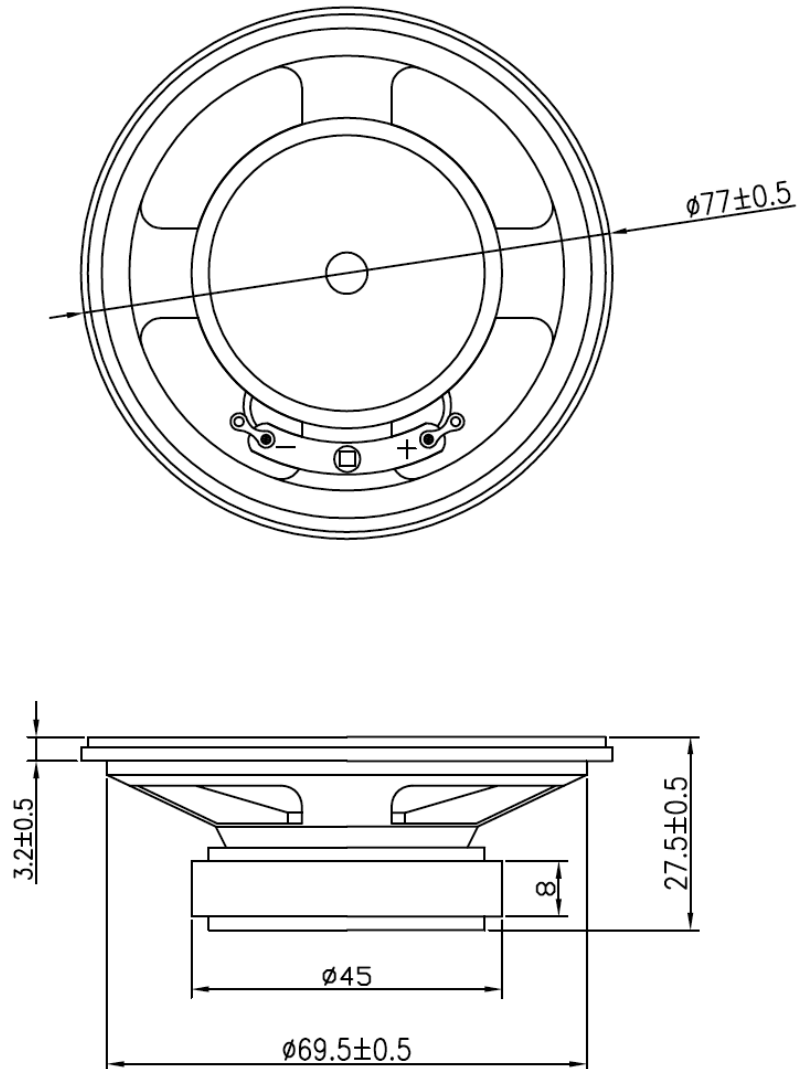


## 4. Speaker Characteristics

### 4.1 SPL vs. Frequency and Impedance vs. Frequency



## 5. Mechanical Drawing (Units: mm)

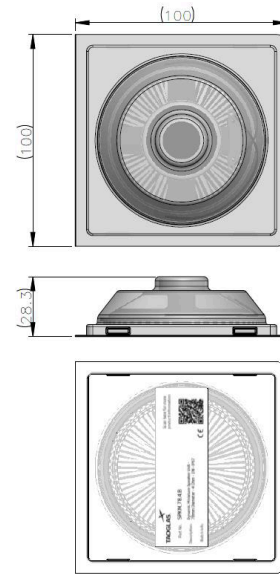


ITEM	DESCRIPTIONS	SPEC.	QTY	REMARK
1	Frame	78 mm	1	Fe
2	Voice coil	4Ω	1	Copper
3	Magnet	Ø45×8 mm	1	(Nd-Fe-B)
4	Diaphragm	34.8×75μ	1	PET
5	Lead wire		2	

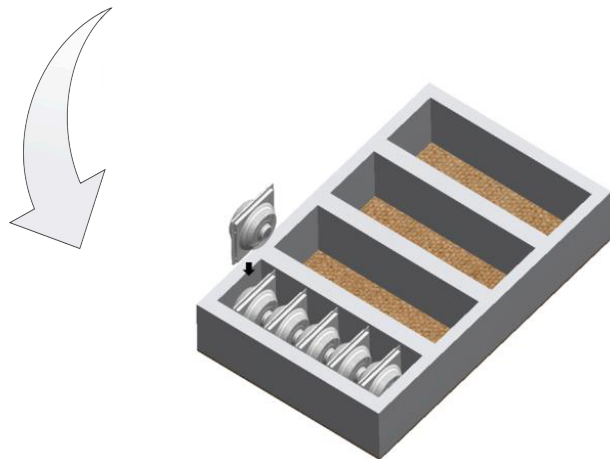


## 6. Packaging

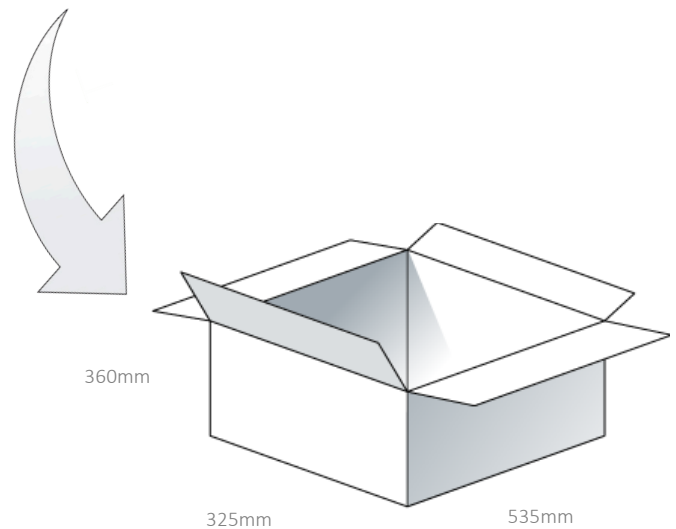
1 pcs SPKM.78.4.B per Blister  
 Dimensions – 100 x 100 x 28.3mm



40pcs SPKM.78.4.B per EPE Tray



120 pcs SPKM.78.4.B per Carton  
 Dimensions – 535 x 325 x 360mm



Changelog for the datasheet

**SPE-23-8-088 – SPKM.78.4.A**

**Revision: D**

Date:	11-04-2023
Changes:	Initial Release
Changes Made by:	Carlos Gomes

**Previous Revisions**

<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>								
<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>																	



[www.taoglas.com](http://www.taoglas.com)

