



# Elektrotechnik Karl-Heinz Mauz GmbH

**LSM-52M/F** (Artikel-Nr. 115145)

**EKULIT**

## SPECIFICATIONS:

TYPE	UNIT	LSM-52M/F
Impedance	$\Omega$	8 $\pm$ 15%
Rated Input Power (long time)	W	5.0
Max. Input Power (1 minute)	W	6.0
Resonant Frequency (Fo)	Hz	180 $\pm$ 20%
Sensitivity (S.P.L.)	dB	89 $\pm$ 3/1.0W/0.1m
Frequency Range	Hz	Fo~20.000
Total Harmonics Distortion		Max. 5%
Voice Coil	$\emptyset$	16.28mm
Magnet Rare earth permanent		Nd-Fe-B $\emptyset$ 15.5x5mm
Operation Test		Must be normal at program source – 5.0W
Buzz, Rattle, etc.		Should not be audible at 6.32V sine Wave between Fo to 20kHz
Polarity		When positive voltage is applied to the terminal marked (+), diaphragm should move to the front
Apperance		Should not exist any obstacle to be harmful to normal operation; damages, cracks, rust and distortions, etc.
Terminal Strength		Capable of withstand 1kg load for 30 seconds without resulting in any damage rejection.
Weight	g	30 $\pm$ 0.5
Operating Temperature	$^{\circ}$ C	-20~+60
Storage Temperature	$^{\circ}$ C	-30~+70

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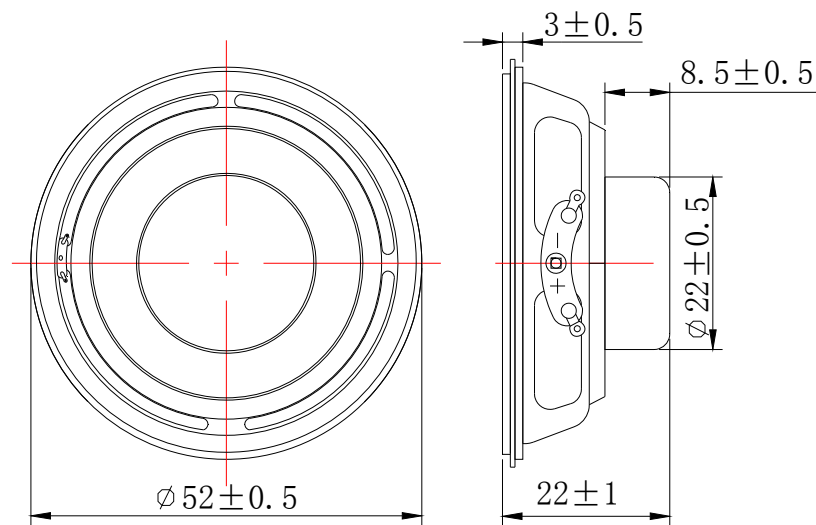
E-mail: **info@ekulit.de** web site: [www.EKULIT.de](http://www.EKULIT.de)

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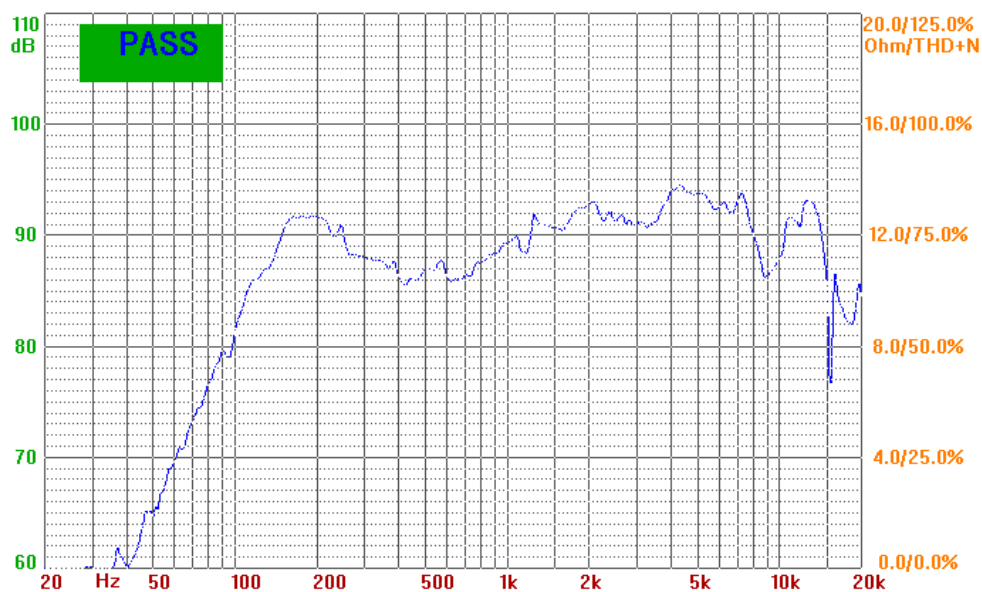
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DIMENSIONS :  
(Unit: mm)



Frequency Response Curve:



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### MEASURING METHOD

#### Test Condition

#### A.STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

Atmospheric pressure : 860mbar to 1060mbar.

#### B.BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

#### C.Standard Test Fixture

Test and measurement will be carried out under normal condition of temperature within 5°C to 35°C, relative humidity within 45% to 85% and air pressure of 860mbar to 1060mbar.

Should uncertainty arise in data obtained from the above atmosphere, control of temperature At 20°C±2°C and relative humidity within 60% and 70%, with air pressure remaining unchanged, To be enforced.

1. Microphone : B&K 4191

2. Standard Baffle : In IEC 268-5 Where 1350mm x 1650mm

3. Testing Distance : 0.1m

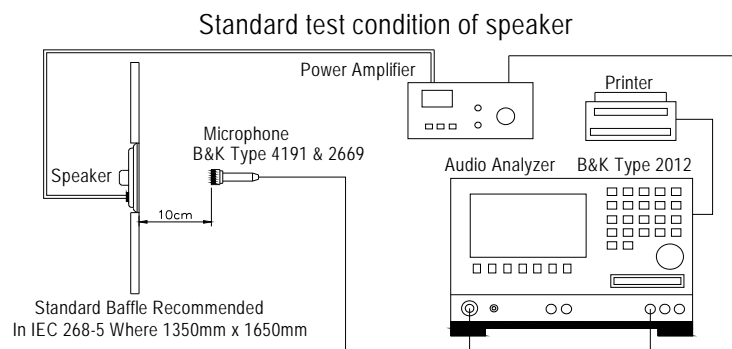
4. Zero Level : -dB

5. Mode : SPEAKER

6. Input Power : 5 W

7. potentiometer Range : 50dB

8. Sweep Time : 0.5sec





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## Reliability test

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal Temperature and then check
03	Humidity test	Keep 96 hours at $+ 60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of;</p> <p>90 ~ 95 % RH</p> <p>65°C</p> <p>25°C</p> <p>0.5hr 6hrs 0.5hr 5hrs</p>
05	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~200~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07	Fix drop test	Fix on jig. Then drop from 152cm height to the concrete floor X, y, z 6 direction. 5 times each, total 30 times.
08	Free drop test	Free drop from 100cm height to the concrete floor X, y, z 6 direction. 1 times each, total 6 times.
09	Rated Power test	Rated Power white noise is applied for 96 hours
10	Max Power test	Max power 1 min on – 2 min off 10 cycles.
11	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
<p>Criterion: After these test , the change of S.P.L shall be within <math>\pm 3</math> dB .</p>		

## SOLDERING CONDITION

Recommend using constant branding iron in 30W, and in temperature range 350°C.

Soldering time not over 2 seconds.

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