Microphone
SMO22-4709750-58T

SMO22-4204013-58S

Description

Our Electret Condenser Microphone is a high-performance, compact microphone designed for use in a wide range of recording, broadcasting, and telecommunications applications. It utilizes a permanently charged electret material as the diaphragm of a capacitor, resulting in a sensitive and accurate microphone that delivers consistent performance over time.





Features

Basic Condition

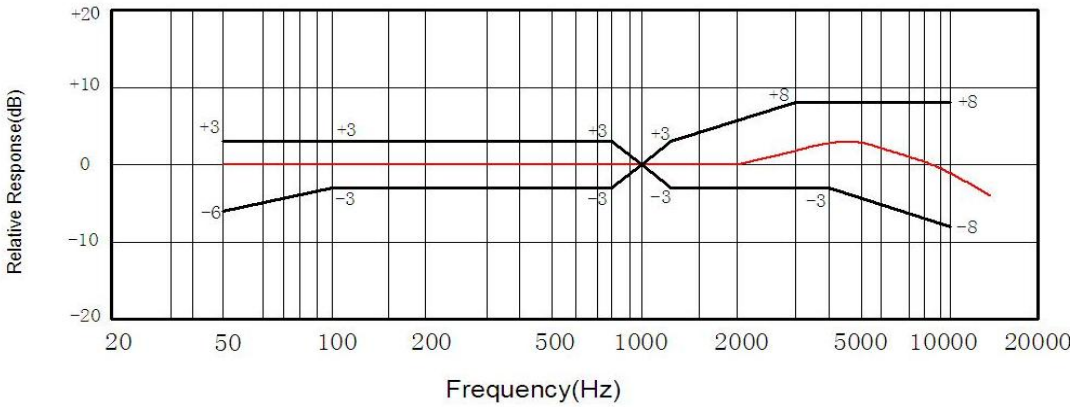
Operating Voltage:	1.0—10Vdc
Operating Temperature Range:	-20—+70℃
Storage Temperature Range:	-20—+70℃

Electrical Characteristics

Specification

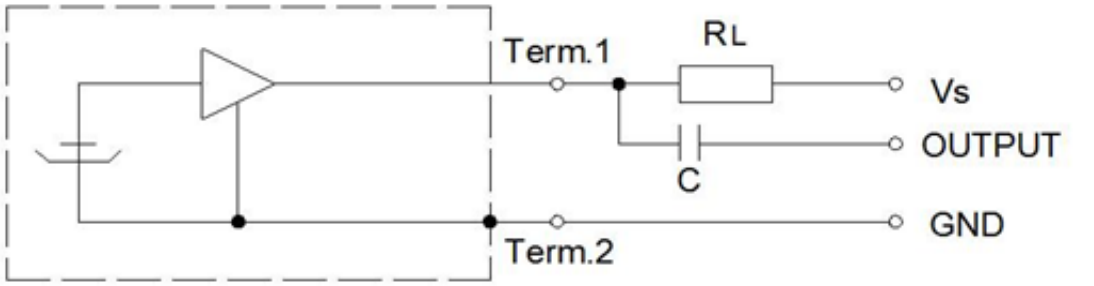
Testing condition:	4.5Vdc, 2.2KΩ
Output Sensitivity:	-42±2dB (at 1KHz, 0dB=1V/Pa)
S/N Ratio:	≥60dB
Sensitivity Reduction:	within –3dB at V_{CC}=4.5V to3.0V
Consumption Current:	≤500μA
Directivity:	Omni directional

Typical Frequency Response Curve



Measuring Method

Schematic Circuit :



Measuring Conditions

- Temperature: 15—35℃
- R.H. 45—75%

Judgement Condition

- Temperature : 20±2℃
- R.H. 45—75%

Microphone

SMO22-4709750-58T

Mechanical and Environment Characteristics.

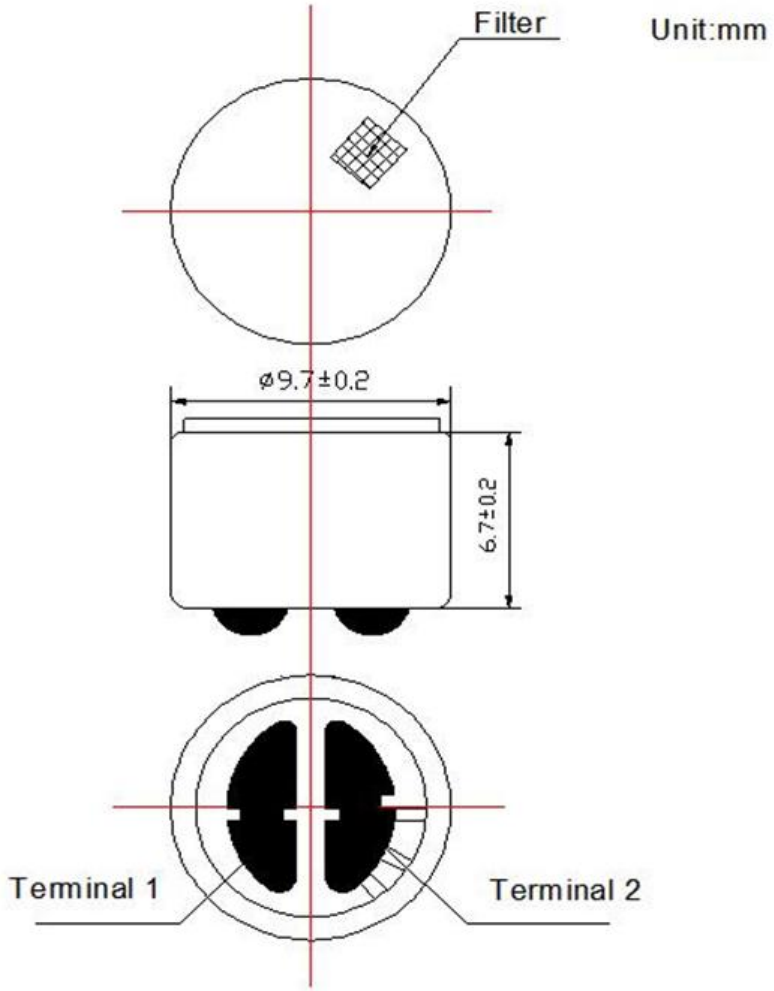
Item	Test Condition Ad Requirement
High Temperature Test	After being placed in a chamber with 70□2ºC for 96 hours, then placed in natural condition for 3 hours. Allowable variation of sensitivity after test: within 3dB.
Low Temperature Test	After being Placed in a chamber with –25□2ºC for 96 hours，then stayed in natural condition for 3 hours. Allowable variation of sensitivity after test: within 3dB.
Humidity Test	After being Placed in a chamber with 90-95% R.H. at +40ºC for 96 hours and then being placed in natural condition for 4 hours. Allowable variation of sensitivity after test: within 3dB.
Temperature Cycle Test	After being placed in a chamber at -25 □2ºC for 30 minutes, products shal be placed at room temperature(+20ºC). After 15 minutes at this temperature, products shall be placed in a chamber at +50□2ºC. After 30 minutes at this temperature, products shall be return to room temperature (+20ºC) for 15 minutes. After 5 above cycles, products shall be measured after being placed in natural condition for 4 hours. Allowable variation of sensitivity after test: within 3dB.
Drop Test	Drop on a hard wood board of 5cm thick, any direction, in state of packing, 6 times, at the height of 80cm . Allowable variation of sensitivity after test: within 3dB.
Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 30 minutes. Allowable variation of sensitivity after test: within 3dB.
Soldering Heat Resistance	To be no interference in operation after Soldering heat shock of +270 □ 5ºC for 3 □ 1 seconds. Allowable variation of sensitivity after test: within 3dB.

Microphone
SMO22-4709750-58T

Remarks

Please pay attention to control the temperature of soldering iron not higher than 270℃. The soldering time for each terminal would be less than 2 seconds. The holes that the pins of the FET pass through should be avoided after soldering. The product shall be soldered in a metal plate (heat sink) which has the higher radiation effects. The said heat sink shall contact with each of the products. The product may destroyed by the static electricity and the countermeasure for elimination the static electricity (the ground of soldering copper, for worktable and for human body) shall be executed. This specification mentions the quality of the product as a single unit. Please insure the product is thoroughly evaluated in your application circuit

Dimension



Microphone

SMO22-4709750-58T

Part number

SMOXX-XXXXX-XX

SM	Microphone
XX	
XXXXX	
XX	

Ordering information

Ordering can be done via www.summit-electronics.com or via info@summit-electronics.com. Please contact us for more information. Customisation of the product is available on request.

Technical support

For all product questions please contact us via info@summit-electronics.com

Document revision

Rev	Date	Changes
V01.00	06-04-2023	First issue of document