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Preliminary Specification

PRODUCT SPECIFICATION

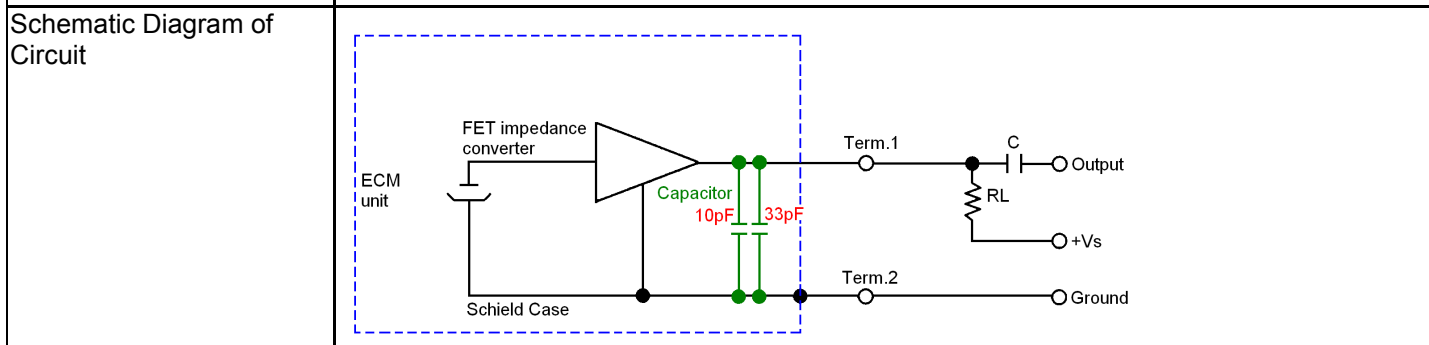
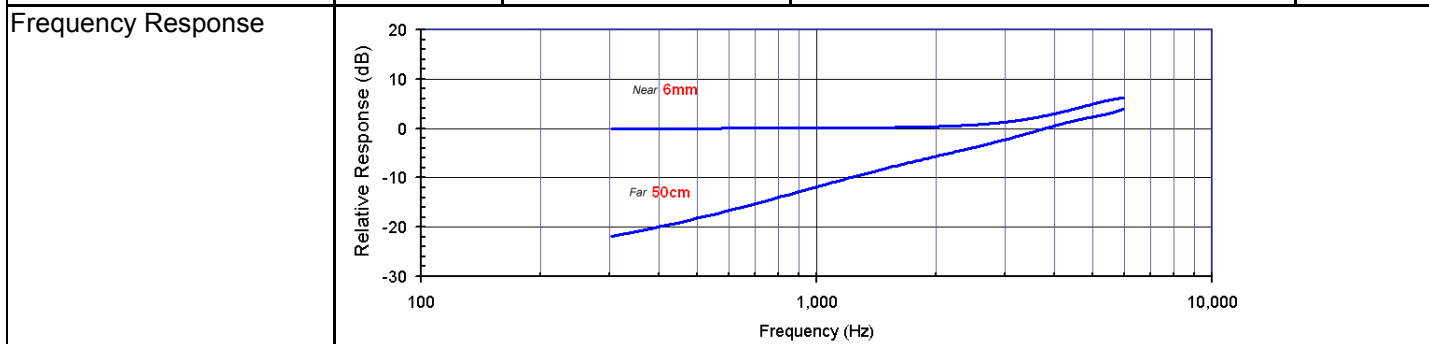
Doc: **MB6022NSC-2**

This specification applies to the electret condenser microphone outlined within this document.

Model Number: **MB6022NSC-2**

I. Electrical Characteristics Test Condition (Vs= 2.0 V, RL= 2.2 k ohm, Ta=20°C, RH=65%)

ITEM	SYMBOL	TEST CONDITION	MINIMUM	STANDARD	MAXIMUM	UNITS
Sensitivity	S	f=1kHz, Pin=1Pa	-47	-44	-41	dB 0dB=1V/Pa
Impedance	Zout	f=1kHz, Pin=1Pa			2.2	kΩ
Directivity			NOISE CANCELLING			
Current Consumption	I				0.5	mA
S/N Ratio	S/N (A)	f=1kHz, Pin=1Pa A Curve	60			dB
Sensitivity Reduction	Δ S	f=1kHz, Pin=1Pa Vs= 2.0 - 1.5			-3	dB
Frequency Range			100-10,000			Hz



II. Mechanical Characteristics

Dimensions	∅ 6 x 2.2	See Drawing in Section IV		
Weight	Less than 0.2g			
Soldering Heat Shock	To be no interference in operation after soldering temperature exposure at 260°C +/-10°C for 2+/-0.5 seconds.			
Terminal Mechanical Strength	The soldering time must be less than 2 seconds each pad, and soldering pull must be larger than 0.5Kg each pad.			
Absolute Maximum Ratings	Operating Voltage	Storage Temperature Range	Operation Temperature Range	
	Vs (V)	Tstg °C	Tope °C	
	10	-40°C to +85°C	-25°C to +70°C	

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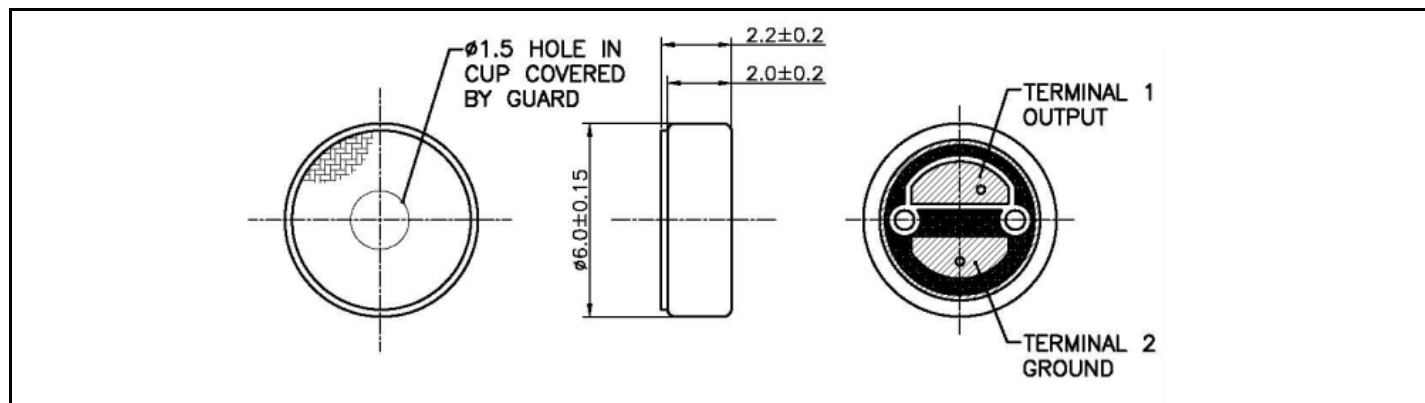
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III. Reliability Tests

Note: After any of the following tests performed, the sensitivity of the microphone unit shall not deviate more than $\pm 3\text{dB}$ from its initial value. The microphone shall maintain its initial operation and appearance. Measurements for tests with thermal requirements are to be done after 2hrs of conditioning at 20°C .

Vibration Test	The microphone to have no interference in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.52mm, for 2 hours at three axes.	
Drop Test	The microphone unit must operate when dropped three times once on each axis from a height of 1m onto a metal plate.	
Temperature Test	High	The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: $+80^\circ\text{C}$ for 96 hrs, and exposed to room temperature for 2 hrs.
	Low	The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: -40°C for 96 hrs, and exposed to room temperature for 2 hrs.
Humidity Test	$+70^\circ\text{C}$ at 90%RH for 120 hrs	
Temperature Cycle Test	After exposure at -40°C for 45 minutes, at $+20^\circ\text{C}$ for 10 minutes, at $+85^\circ\text{C}$ for 45 minutes, at $+20^\circ\text{C}$ for 10 minutes, 27 cycles. (The measurement to be done after 2 hrs of conditioning at $+20^\circ\text{C}$.)	

IV. Dimensional Drawing



V. Other

Noise Cancelling feature with improved RF immunity.

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