



THE DATASHEET OF MB6052USZ-2

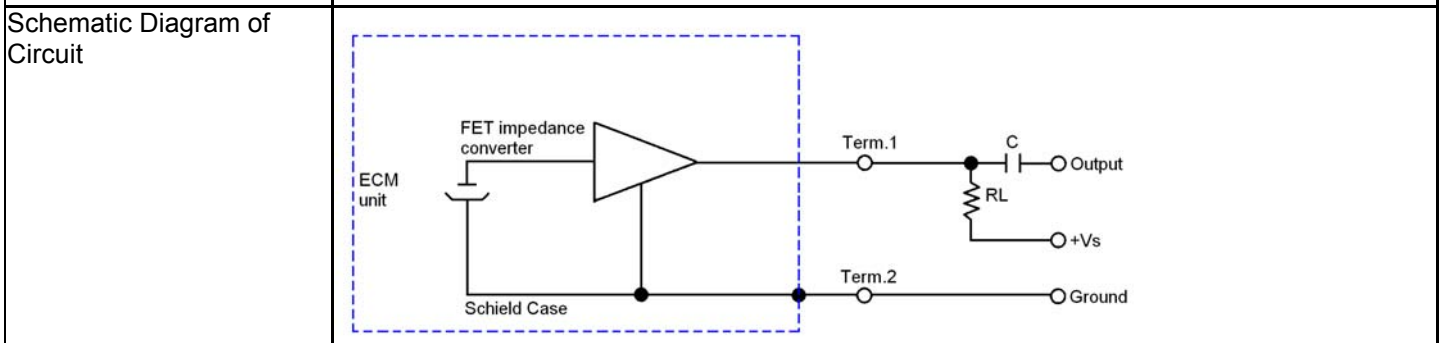
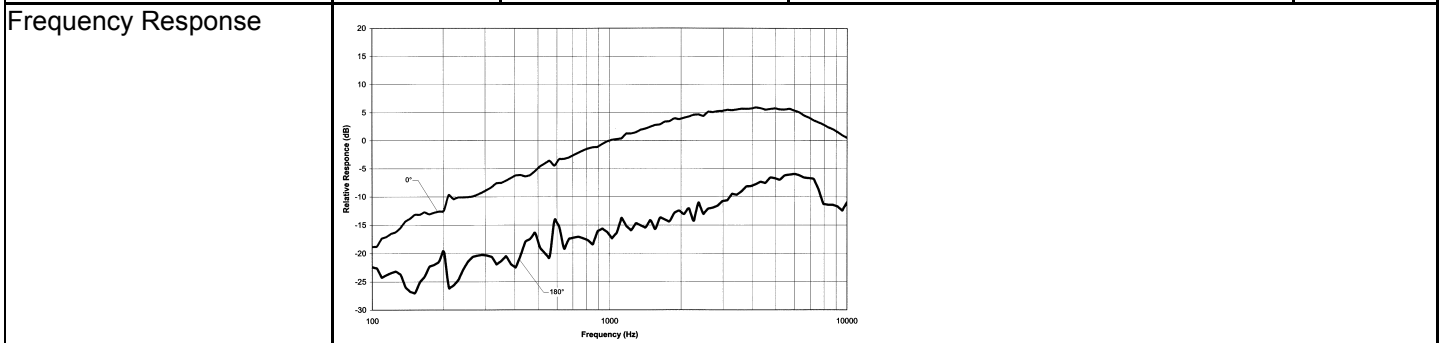


This specification applies to the electret condenser microphone outlined within this document.

Model Number: **MB6052USZ-2**

I. Electrical Characteristics Test Condition ($V_s = 2.0\text{ V}$, $R_L = 2.2\text{ k}\Omega$, $T_a = 20^\circ\text{C}$, $RH = 65\%$)

ITEM	SYMBOL	TEST CONDITION	MINIMUM	STANDARD	MAXIMUM	UNITS
Sensitivity	S	$f = 1\text{kHz}$, $P_{in} = 1\text{Pa}$	-47	-44	-41	dB $0\text{dB} = 1\text{V/Pa}$
Impedance	Z_{out}	$f = 1\text{kHz}$, $P_{in} = 1\text{Pa}$			2.2	$\text{k}\Omega$
Directivity			UNI-DIRECTIONAL			
Current Consumption	I				0.5	mA
S/N Ratio	S/N (A)	$f = 1\text{kHz}$, $P_{in} = 1\text{Pa}$ A Curve	60			dB
Sensitivity Reduction	ΔS	$f = 1\text{kHz}$, $P_{in} = 1\text{Pa}$ $V_s = 2.0 - 1.5$			-3	dB
Frequency Range			100-10,000			Hz



II. Mechanical Characteristics

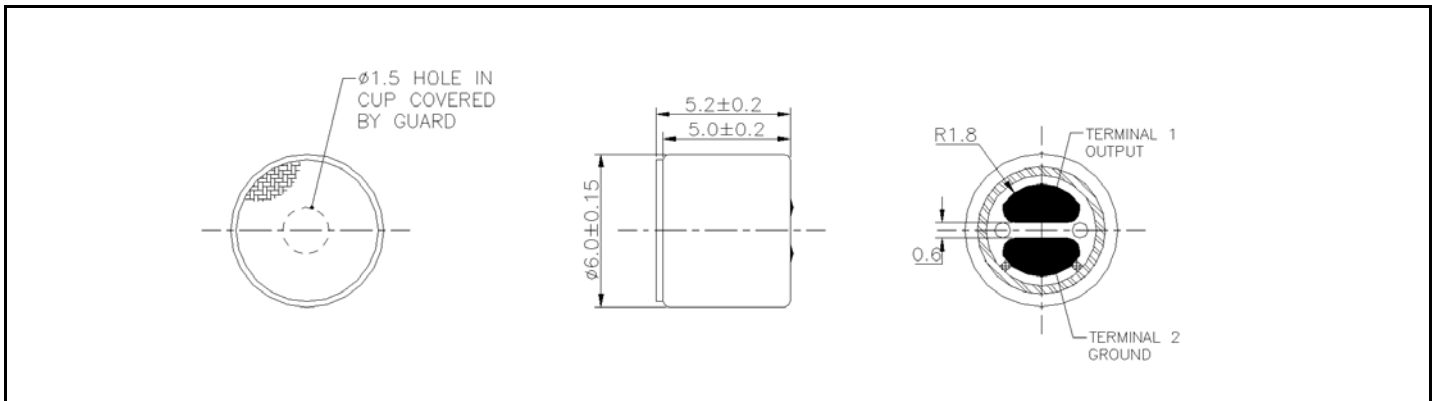
Dimensions	\varnothing 6 x 5.2	See Drawing in Section IV		
Weight	Less than 0.5g			
Soldering Heat Shock	To be no interference in operation after soldering temperature exposure at $330^\circ\text{C} \pm 10^\circ\text{C}$ for below 2 seconds.			
Terminal Mechanical Strength	The soldering time must be 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	
	V_s (V)	T_{stg} $^\circ\text{C}$	T_{ope} $^\circ\text{C}$	
	1.5-10.0	-40°C to $+85^\circ\text{C}$	-30°C to $+70^\circ\text{C}$	

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 1minute 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: $+85^{\circ}\text{C}$ for 200 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 200 hrs, and exposed to room temperature for 2 hrs.
Humidity Test	$+40^{\circ}\text{C}$ at 95%RH for 200 hrs	
Temperature Cycle Test	After exposure at -25°C for 30 minutes, at $+20^{\circ}\text{C}$ for 10 minutes, at $+60^{\circ}\text{C}$ for 30 minutes, at $+20^{\circ}\text{C}$ for 10 minutes, 5 cycles. (The measurement to be done after 2 hrs of conditioning at $+20^{\circ}\text{C}$.)	

IV. Dimensional Drawing





V. Other

Directivity Request: -8dB (180 degree vs. 0 degree)

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