

Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Knowles](#)
[MB6027USC-3](#)

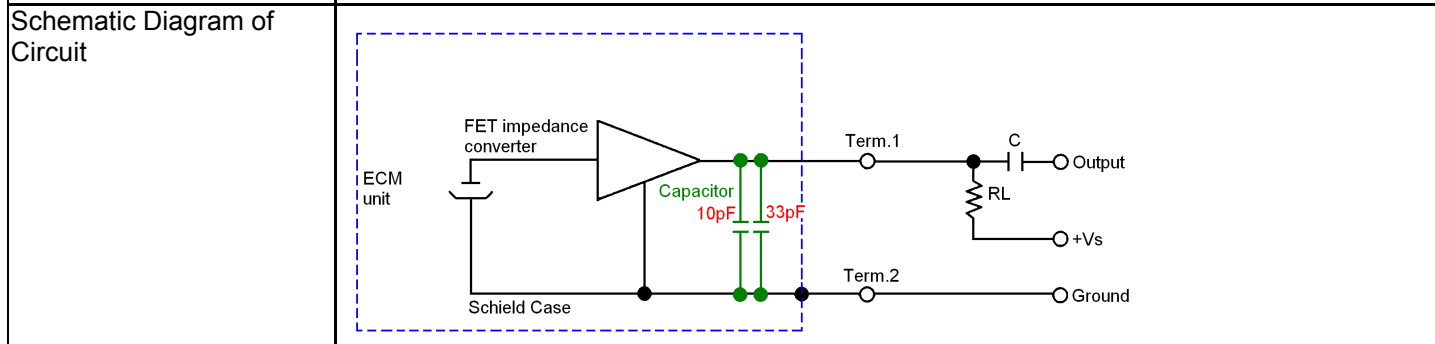
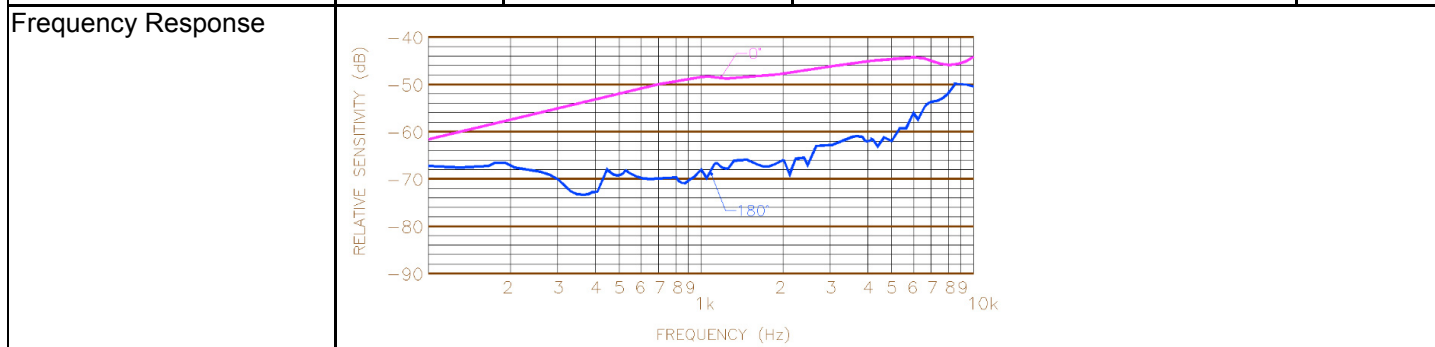
For any questions, you can email us directly:
sales@integrated-circuit.com

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

Model Number: **MB6027USC-3**

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	-50	-47	-44	dB 0dB=1V/Pa
Impedance	Zout	f=1kHz, Pin=1Pa			2.2	kΩ
Directivity			UNIIDIRECTIONAL			
Current Consumption	I				0.5	mA
S/N Ratio	S/N (A)	f=1kHz, Pin=1Pa A Curve	50			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

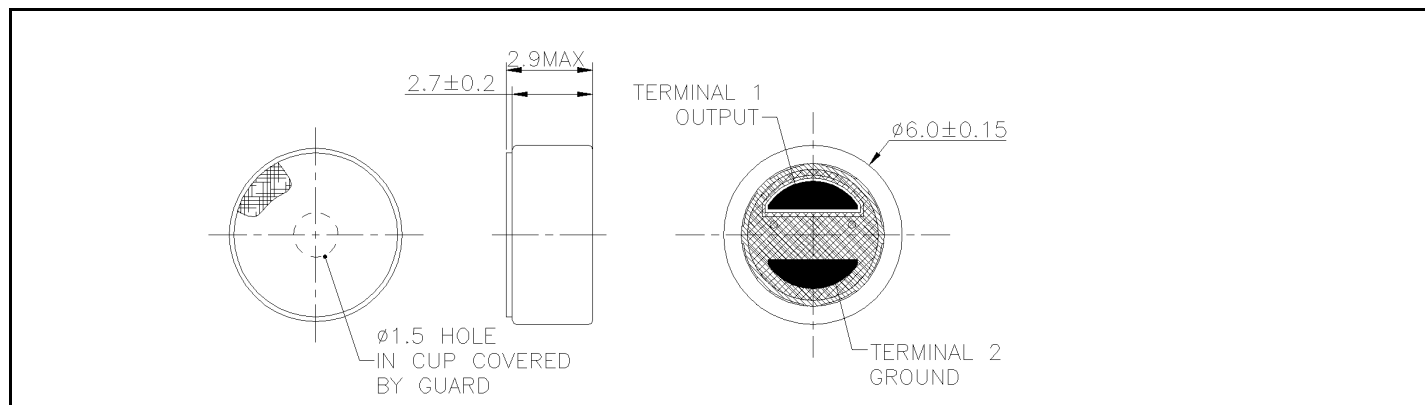
Dimensions	∅ 6 x 2.7	See Drawing in Section IV		
Weight	Less than 0.2g			
Soldering Heat Shock	To be no interference in operation after soldering temperature exposure at 260°C +/-5°C for 2 +/- 0.5 seconds.			
Terminal Mechanical Strength	The soldering time must be less than 2 seconds each pad, and soldering 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 +80°C	-20°C to +70°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 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 72 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 72 hrs, and exposed to room temperature for 2 hrs.
Humidity Test	$+40^\circ\text{C}$ at 95%RH for 240 hrs	
Temperature Cycle Test	After exposure at -20°C for 60 minutes, at $+25^\circ\text{C}$ for 60 minutes, at $+70^\circ\text{C}$ for 60 minutes, at $+25^\circ\text{C}$ for 60 minutes, 10 cycles. (The measurement to be done after 6 hrs of conditioning at $+20^\circ\text{C}$.)	

IV. Dimensional Drawing



V. Other

Directivity Request: -10dB (180 degree vs. 0 degree)

The information contained in this literature is based on our experience to date and is believed to be reliable and it is subject to change without notice. It is intended as a guide for use by persons having technical skill at their own discretion and risk. We do not guarantee favorable results or assume any liability in connection with its use. Dimensions contained herein are for reference purposes only. For specific dimensional requirements consult factory. This publication is not to be taken as a license to operate under, or recommendation to infringe any existing patents. This supersedes and voids all previous literature.