

Specification

of Electret Condenser Microphone

Our model: EMS-93

Cust model: _____

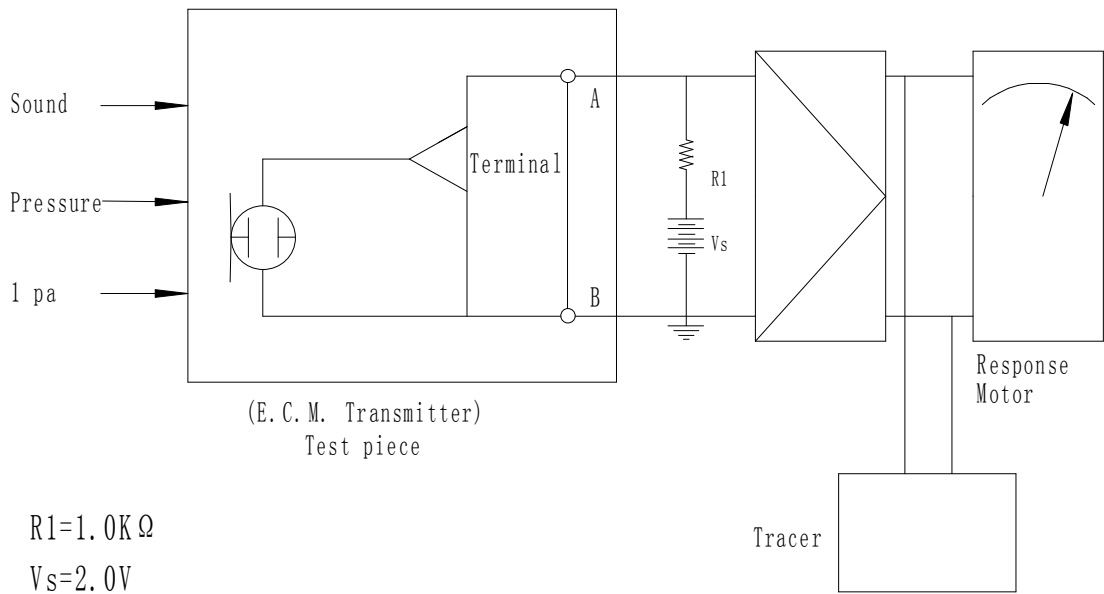
To: _____

Apvd	Chkd	Design

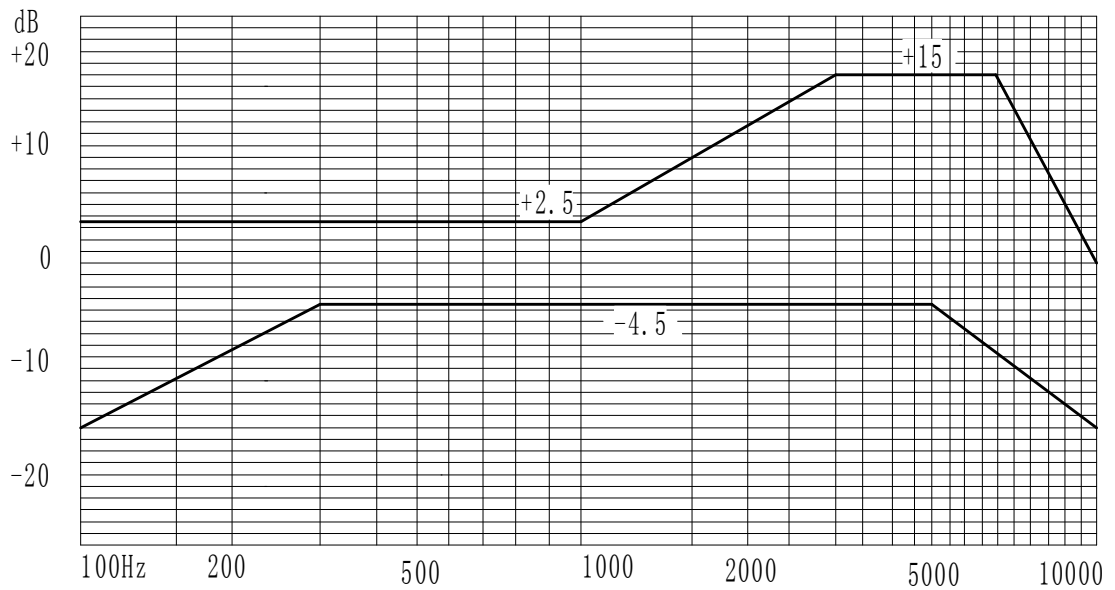
Customer Approval:

1.	Scope	This specification applies electret condenser microphone(E.C.M)
2.	Model No.	EMS-93
3.	Operation Condition	
	3.1 Temperature	-20~+70°C
	3.2 Rel. Humidity	35%~85%RH
	3.3 Pressure	86~106Kpa
	3.4 Environmental Noise	36dB(Maximum)
	3.5 Operation Voltage	+1~+10VDC
	3.6 Earth	⊖
4.	Electrical Characteristics	
	4.1 Standard Operation Voltage	+2.0VDC
	4.2 Impedance	1k Ω (Maximum)
	4.3 Current Consumption	0.5mA(Maximum)
	4.4 Sensitivity	(0dB=1V/Pa,1KHz) -40 ± 2dB
	4.5 Directivity	Omni-directional
	4.6 S/N Ratio	58dB(Minimum)(A-Curve at 1KHz,1Pa)
	4.7	
	Test Temperature	20°C±2°C
	Test Rel. Humidity	45%~65%RH

4.8 Schematic Diagram



4.9 Frequency Response

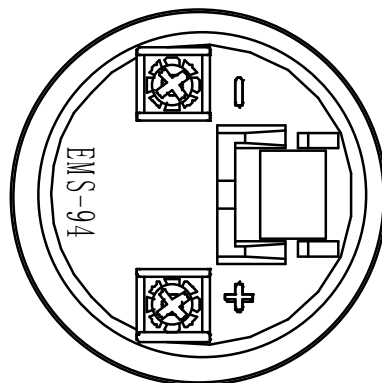
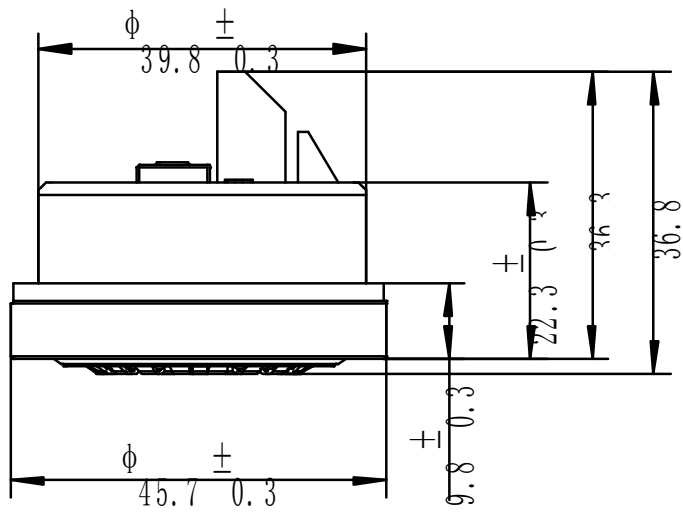
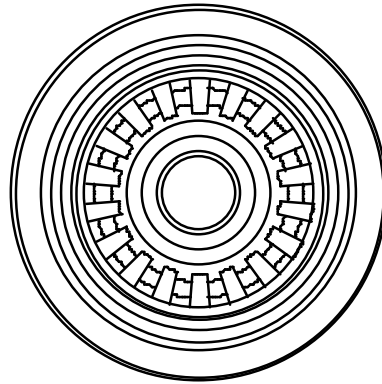


5. Mechanical Characteristics

5.1 Dimension $\phi 45.7 \times 38.6$

5.2 Mass $\leq 25.5g$

5.3 Dimensional Drawing



6.	Reliability Tests The sensitivity to be within $\pm 3\text{dB}$ of initial sensitivity after 3 hours of conditioning at 20°C .	
6.1	Vibration Test	Frequency 1 $10\text{Hz}\sim 55\text{Hz}$ Amplitude $\pm 0.15\text{mm}$ Frequency 2 $55\text{Hz}\sim 150\text{Hz}$ Acceleration 20m/s^2 Change of Frequency 1 octave/min 2 hrs in each of 3 axes
6.2	Shocks Test	Pulse Shape Half Sinusoidal Pulse Duration 11ms Acceleration 150m/s^2 Number of Jolts 10 in each of 3 axes
6.3	Drop Test	To be no interference in operation after dropped to concrete floor each time from 1 meter height at three directions in state of packing.
6.4	Dry Heat/Cold Test	72°C for 72 hrs -20°C for 72 hrs
6.5	Damp Heat Test	$90\%\text{RH}, +40^\circ\text{C}$ for 100 hrs
6.6	Temperature Cycles Test	(2h) (1h) (2h) 4cycles
7.	7.1 The soldering copper of a smaller type of less than 20W shall be applied. 7.2 The temperature of the working surface of the soldering copper shall be below 270°C . 7.3 E.C.M shall be soldered fixed on the metal block (heat sink) which has the higher radiation effects. Said heat sink shall contact with each of E.C.M. 7.4 The soldering time for each terminal shall be 1~2 sec. 7.5 E.C.M may easily destroyed by the static electricity, and the countermeasure for eliminating the static electricity (the ground for soldering copper, for worktable and for human body) shall be executed.	

PROPOSED GENERAL PACKAGE FOR P/N: EMS-93

