

# Best No. 302147 ELECTRET CONDENSER MICROPHONE UNIT

MODEL ECM-10

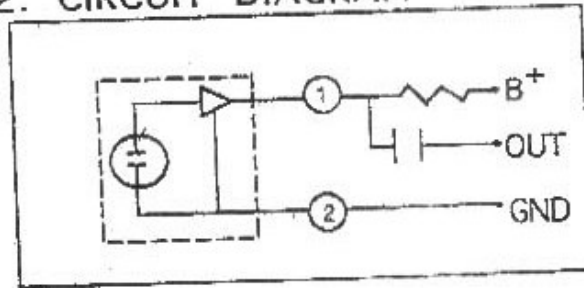
OMNI DIRECTIONAL

## 1. SENSITIVITY

( $O_{DB} = 1V/\mu \text{ bar}$ , 1KHZ,  
 $V_{CC} = 4.5V$ ,  $R_L = 1K \Omega$ )

D:  $-68 \pm 3dB$

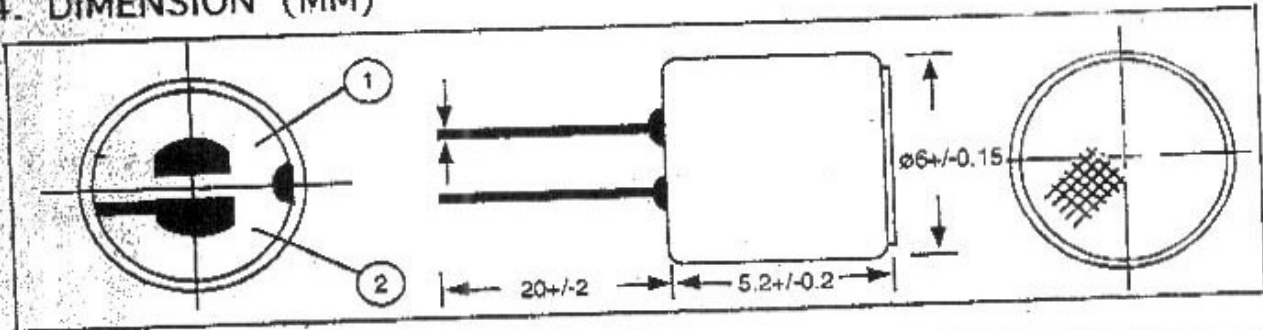
## 2. CIRCUIT DIAGRAM



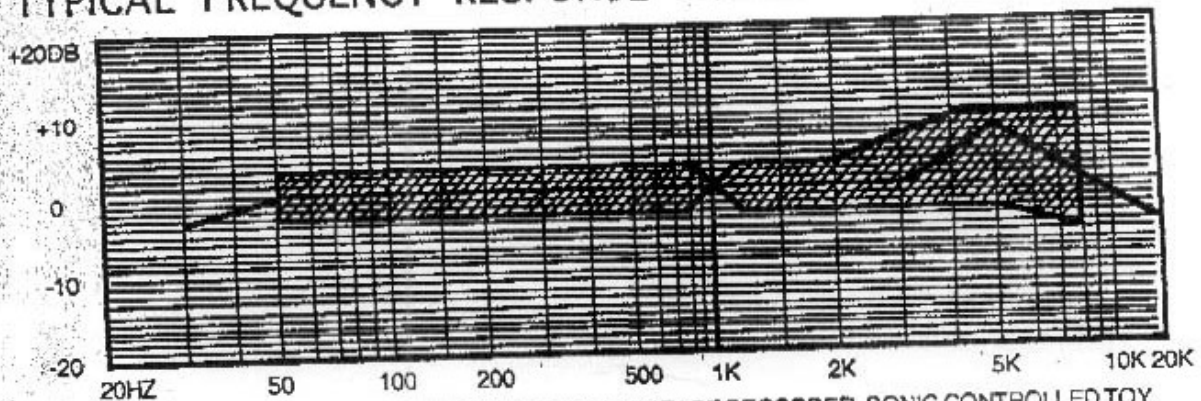
## 3. SPECIFICATIONS

1. IMPEDANCE: LOW
2. STANDARD VOLTAGE: 4.5 V
3. RANGE OF OPERATING VOLTAGE: 1.5 V TO 10 V
4. CURRENT DRAIN: 0.5mA Max
5. S/N RATIO: 40 db or more
6. MAXIMUM INPUT SOUND PRESSURE: 120 db SPL

## 4. DIMENSION (MM)



## 5. TYPICAL FREQUENCY RESPONSE CURVE



MAIN USAGE OF ECM UNITS: MICROPHONE, CASSETTE TAPE RECORDER, SONIC CONTROLLED TOY, INTERCOM SYSTEM, SONIC CONTROLLED SWITCH, TELEPHONE SET, DISCO LIGHT & ANSWERING MACHINE, ETC.

## 6. RELIABILITY TEST

VIBRATION TEST	TO BE NO INTERFERENCE IN OPERATION AFTER VIBRATION 12HZ TO 50HZ FOR 1 MINUTE FULL AMPLITUDE, FOR 1.5 HOUR AT 3 AXISES.
DROP TEST	TO BE NO INTERFERENCE IN OPERATION AFTER DROPPED TO CONCRETE FLOOR EACH ONE TIME FROM 1 METER HEIGHT AT 3 DIRECTIONS IN STATE OF PACKING.
TEMPERATURE TEST	a) AFTER EXPOSURE AT 55° FOR 1 HOUR, SENSITIVITY TO BE WITHIN +/-3DB FROM INITIAL. b) AFTER EXPOSURE AT -10° FOR 1 HOUR, SENSITIVITY TO BE WITHIN +/-3DB FROM INITIAL. (THE MEASUREMENT TO BE DONE AFTER 2 HOURS OF CONDITIONING AT 25°C.)
HUMIDITY TEST	AFTER EXPOSURE AT 40°C AND 95% RH FOR 48 HOURS, SENSITIVITY TO BE WITHIN +/-3DB FROM INITIAL. (AFTER 1 HOUR OF CONDITIONING AT 25 C.)
TEMPERATURE CYCLE TEST	AFTER EXPOSURE AT -10°C FOR 1 HOUR, AT 25°C FOR 1 HOUR, AT 50°C FOR 1 HOUR, AT 25°C FOR 2 HOURS, 4 CYCLES, SENSITIVITY TO BE WITHIN +/-3DB. (AFTER 2 HOURS OF CONDITIONING AT 25°C.)

## \* REGARDING THE SOLDERING OPERATION:

EACH CONDENSER MICROPHONE CONTAINS A FET WITHIN ITS CASE.  
GENERALLY, SEMICONDUCTORS ARE EASILY WEAKENED BY OVER-HEATING, OVER-CHARGE OF VOLTAGE.

SPECIAL CAUTION IS NEEDED FOR PROPER SOLDERING AS FOLLOWS.

1. USE 30W (OR UNDER) SOLDERING IRON AND MAINTAIN 230°-260°C IN OPERATION.

2. SOLDERING SHOULD BE ACCOMPLISHED WITHIN TWO SECONDS AT EACH TERMINAL SO AS NOT TO BE OVERHEATED.

3. DO NOT MAKE A CAVITY AT THE SERFACE OF LEAD ON THE PATTERN PLATE. (A CAVITY MAY CHANGE THE CHARACTERISTICS OF CONDENSER MICROPHONE.)