

**PART NUMBER: CME-1538-100LB****DESCRIPTION: ELECTRET CONDENSER  
MICROPHONE****SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity	f= 1 KHz, 1Pa 0 dB= 1 V/Pa	-41	-38	-35	dB
operating voltage			2	10	Vdc
output impedance	f= 1 KHz, 1Pa		2.2		kΩ
sensitivity reduction	f= 1 KHz, 1Pa Vs=2 V dc to 1.5 V dc		-3		dBA
frequency		20		20,000	Hz
current consumption	Vs=2 V dc RL=2.2 kΩ			0.5	mA
signal to noise ration	f= 1 KHz, 1 Pa A weighted		58		dBA
operating temperature		-30		80	°C
storage temperature		-30		80	°C
dimensions	ø4 x H1.5 mm				
weight				0.36	g
material	brass (Au plating)				
terminal	wire type				
RoHS	2011/65/EU				
dustproof/waterproof level	IP67, IEC standard 529 edition 2.0 (1989)				

Notes: 1. We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20dB compared to the "ubar" indication. Example: -60dB (0dB = 1V/ubar) = -40dB (1V/Pa)

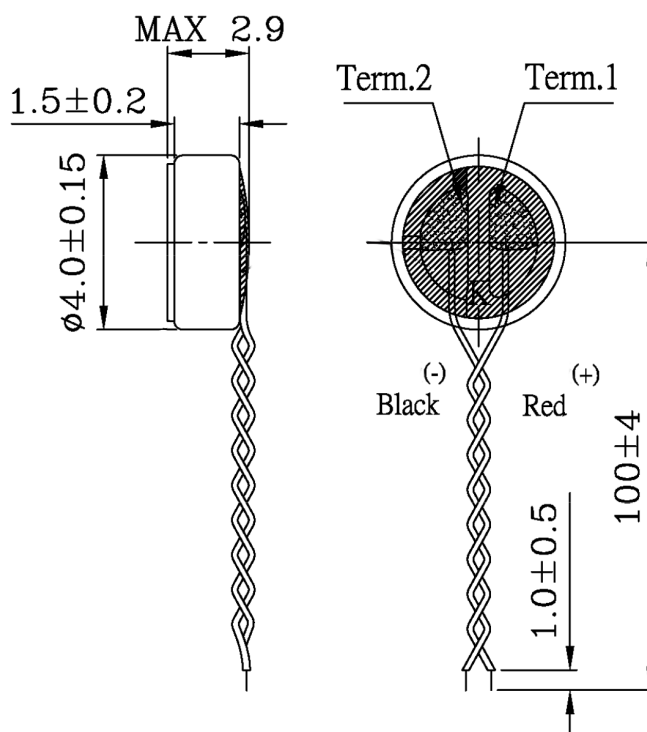
2. All specifications measured at 5~35°C, humidity at 45~85%, under 86~106kPa pressure, unless otherwise noted.

**APPEARANCE DRAWING**

unit: mm

tolerance: ±0.2

wire: UL1571 32 AWG

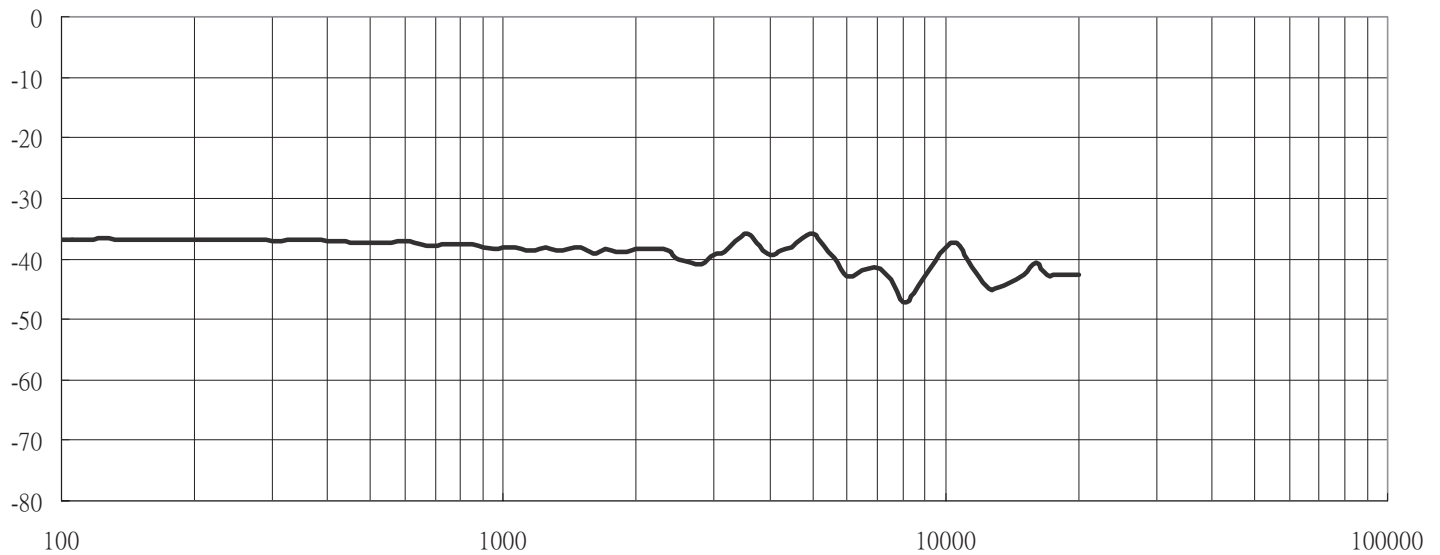




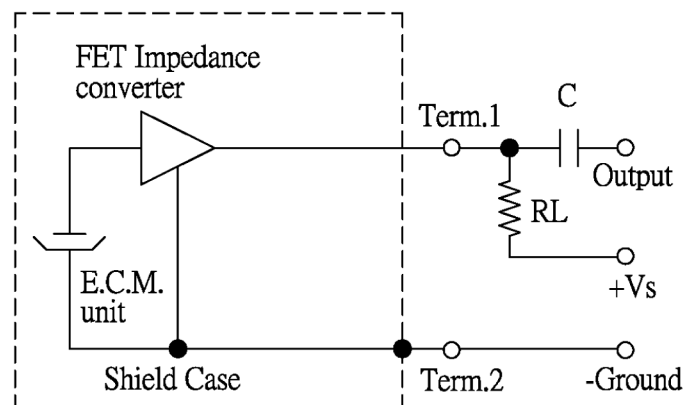
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## FREQUENCY RESPONSE CURVE



## MEASUREMENT CIRCUIT



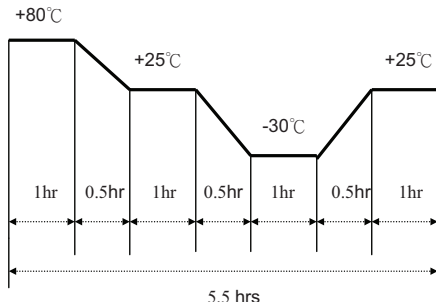
Schematic Diagram

**$RL=2.2K\Omega$**

**PART NUMBER: CME-1538-100LB****DESCRIPTION: ELECTRET CONDENSER  
MICROPHONE****MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard
soldering heat resistance	Stripped wires are immersed in rosin for 5 seconds and then immersed in solder bath of $270 \pm 5^{\circ}\text{C}$ for $3 \pm 0.5$ seconds.	90% min. stripped wires should be wet with solder (except edge of terminal).
PCB wire pull strength	The force of 4.9 N is applied for 30 sec. to double lead wire.	No damage or cutting off.
vibration test	The microphone should be measured after a vibration amplitude of 1.5 mm with 10 ~ 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	The sensitivity should be within $\pm 3\text{dB}$ compared with the initial measurement.
drop test	The microphone without packaging is subjected to 3 drops on each axis from the height of 100 cm onto a 20 mm thick wooden board.	

**ENVIRONMENT TEST**

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at $+80^{\circ}\text{C}$ for 1 hour.	The microphone will be measured after being placed at $+25^{\circ}\text{C}$ for 6 hours. The value of the oscillation frequency should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 3\text{dB}$ compared to the initial measurements.
low temperature test	After being placed in a chamber at $-30^{\circ}\text{C}$ for 1 hour.	
humidity test	After being placed in a chamber at $+40^{\circ}\text{C}$ and $90 \pm 5\%$ RH for 240 hours.	
temperature cycle test	The part will be subjected to 10 cycles. One cycle will consist of: 	

**TEST CONDITIONS**

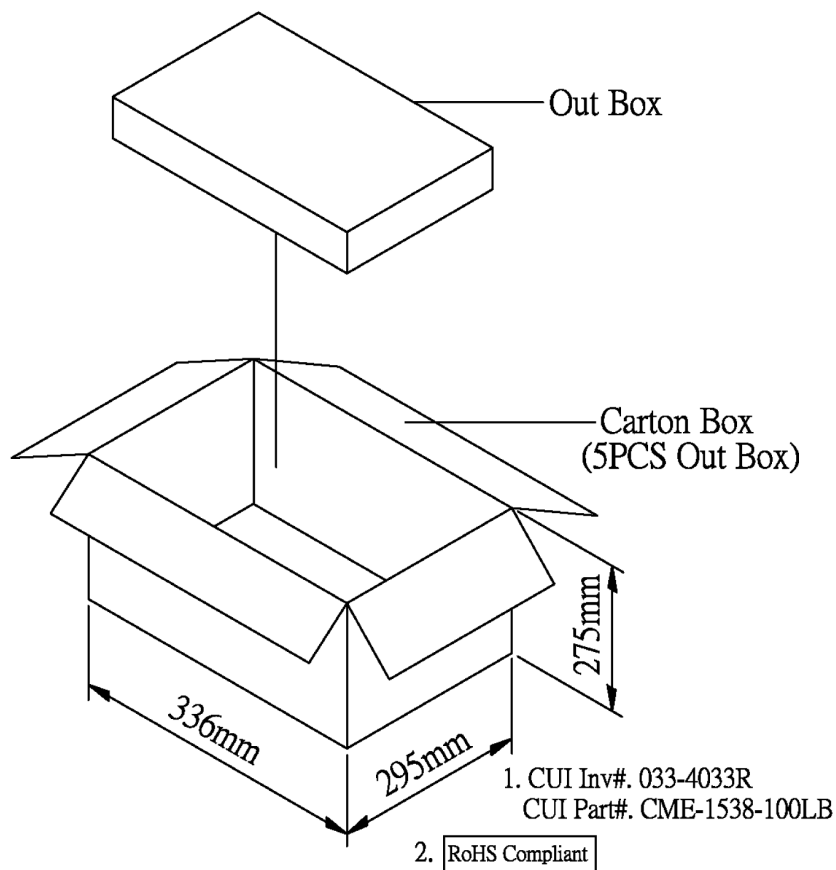
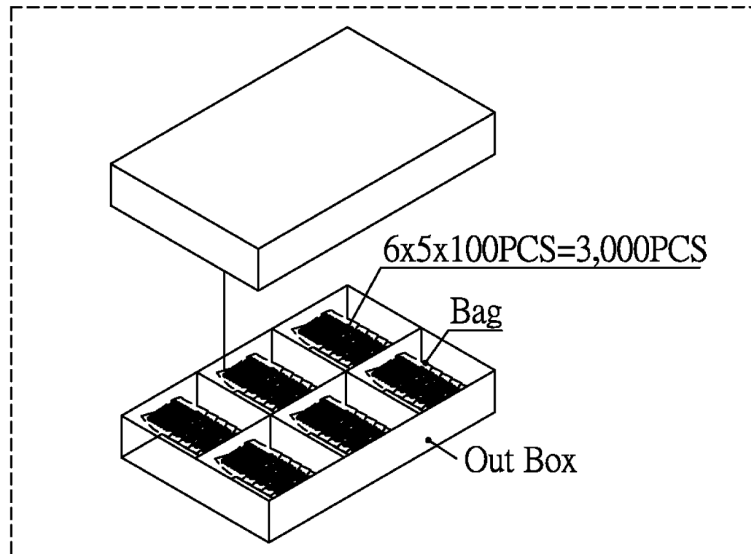
standard test conditions	a) Temperature: $+5 \sim +35^{\circ}\text{C}$	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: $+25 \pm 2^{\circ}\text{C}$	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar



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## PACKAGING



Out Box	310mmx248mmx49mm	1x3,000PCS=3,000PCS
Carton Box	336mmx295mmx275mm	3,000PCSx5=15,000PCS

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