

MESSRS.**SPECIFICATION FOR APPROVAL****承 認 书**

Product	ELECTRET CONDENSER MICROPHONE
Part No.	HMB-O60F26-CWH1(RoHS)
Customer Part No.	
Customer Approval	EK-606027K26L75

Approved By	Checked By	Made By
王台平 MAY-08-2020	曹丽萍 MAY-08-2020	LILY MAY-08-2020

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1. 变更记录 (History change record)

Change Items	Date	Note	Drawn by	Checked by
	2020-05-08	First Issue	Lily	王台平 2020-05-08

2. 储藏与判断条件 (Storage And Judgement Conditions)

	Temperature Range(°C)	Rel. Humidity(%)	Static Pressure(kPa)
Judgement	15~35	60~70	86~106
Storage	-40~85		
Operating	-40~70		

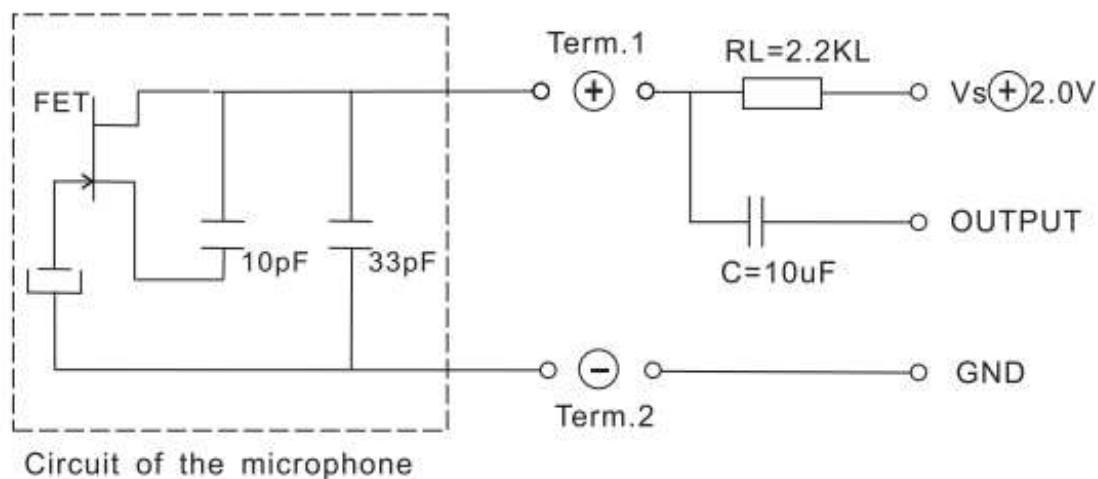
3. 规格 (Specifications)

Test conditions($V_S=2.0V$ $R_L=2.2k\Omega$ $Temp=23\pm1^\circ C$ $R.H=65\pm2\%$)

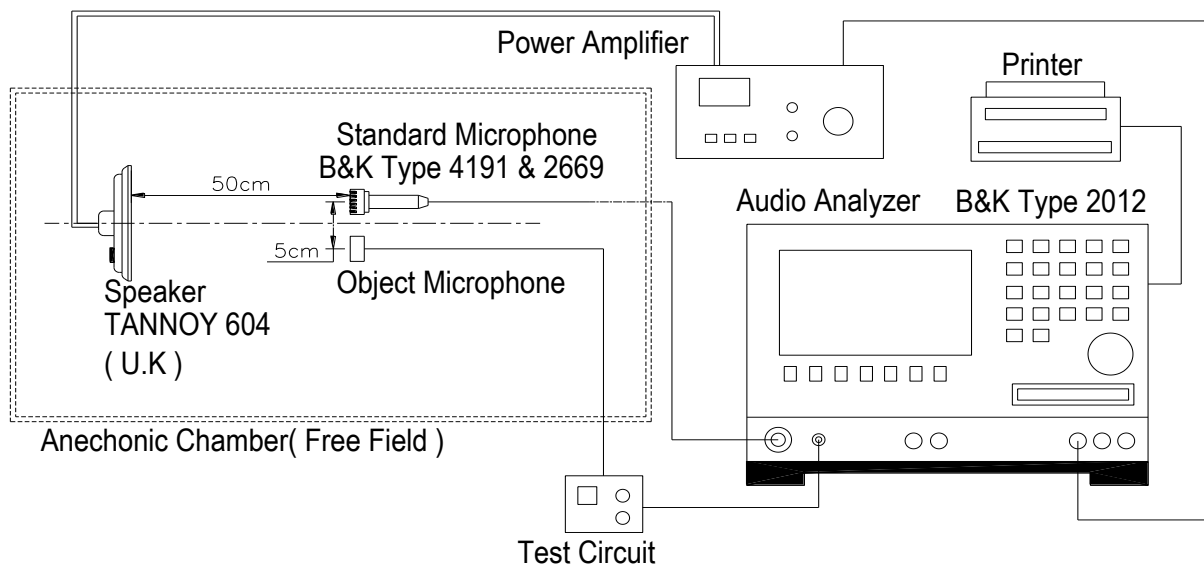
Item	Symbol	Test Conditions	Min	Standard	Max	Unit
灵敏度 Sensitivity	S	$f=1kHz, P_{in}=1Pa$	-29	-26	-23	dB ($0dB=1V/Pa$)
阻抗 Impedance	Z	$f=1kHz, P_{in}=1Pa$			2.2	$k\Omega$
指向性 Directivity	Omni-directional					
消耗电流 Current Consumption	I				500	μA
工作电压 Operation Voltage Range	U		1.0	2.0	10	V
信噪比 S/N Ratio	S/N(A)	$f=1kHz, P_{in}=1Pa$ A Curve	67			dB
降压特性 Decreasing Voltage Characteristic	ΔS	$f=1kHz, P_{in}=1Pa$ $V_S=2.0-1.5V$			-3	dB

4. 测试电路 (Standard Test Circuit)

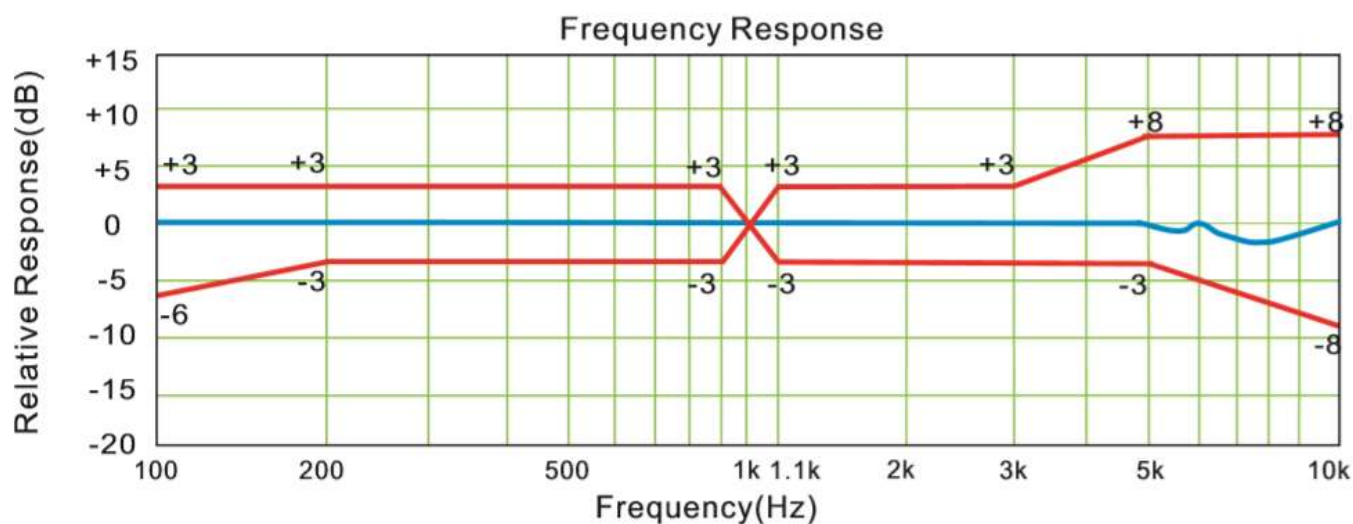
$V_S=2.0V$ $R_L=2.2k\Omega$ $T_e=20^\circ C$ $R.H.=60\%$



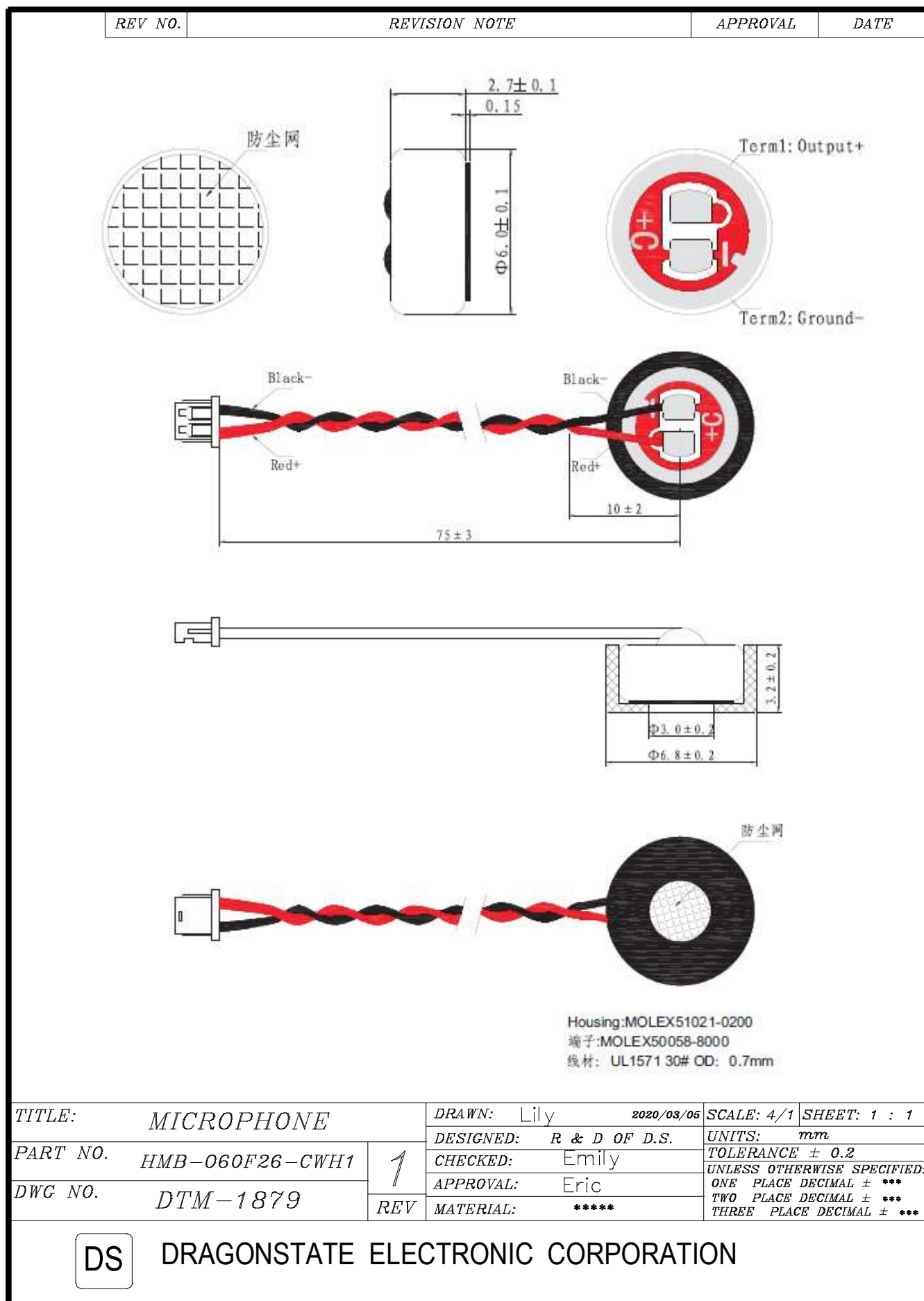
5. 测试装备图 (Standard Test Fixture)



6 频响曲线 (Frequency Response Curve)



7. 外观图 (Appearance Drawing)



8. 可靠性试验 (Reliability Test)

在下列试验完成后,在温度为 20℃,相对湿度为 65%的条件下恢复 3 小时后进行测试,灵敏度与初始灵敏度相差在±3dB 以内。

(All tests should be done after 3 hours of conditioning at 20℃, R.H65%, while the sensitivity is to be within ± 3 dB, from the initial sensitivity after the following experiments.)

8.1 高温试验 (HIGH TEMPERATURE TEST)

温度(High temperature): +70℃
放置时间(Duration): 200hours

8.2 低温试验 (LOW TEMPERATURE TEST)

温度(Low temperature): -40℃
放置时间(Duration): 200 hours

8.3 温度循环试验(如图 1) (TEMPERATURE CYCLE TEST)(See in Fig.1)

低温(Low temperature): -40℃
高温(High temperature): +70℃
转化时间(Changeover time): 30min
放置时间(Duration): 30min
次数(Cycle): 10

8.4 湿度 (STATIC HUMIDITY TEST)

温度(Temperature): +60℃
相对湿度(Relative humidity): 90~95%
放置时间(Duration): 200 hours

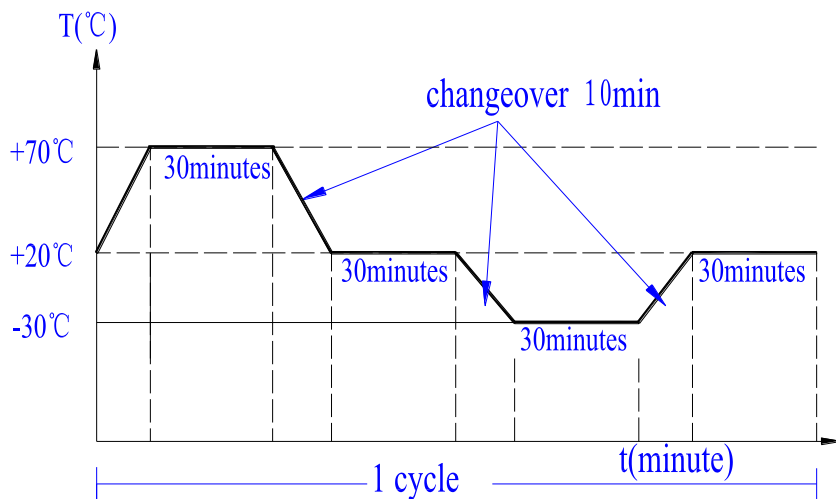
8.5 振动试验 (VIBRATION TEST)

振幅(Amplitude): 1.52mm
持续时间(Duration): 1 分钟/面(minutes/plane)
频度范围(Freq.range): 10~55Hz
试验时间(Total time): 2 小时(hour)

8.6 跌落试验 (DROP TEST)

不带包装的跌落到 20mm 厚的地板上(Drop a unit unpacked onto a board of 20mm thick)

高度(Height): 1 m
次数(Cycle): 6 (1 each plane)



9. 焊接要求 (Regarding the Soldering operation)

每个驻极体电容传声器在其麦克风上都有一个 FET,这种 FET 在过热和电流撞击时易损坏，所以对于焊接应遵循以下操作：

- 要求使用 25W-35W 烙铁，并保持 $350\pm 10^{\circ}\text{C}$ 的温度范围。
- 在每一个端的焊接应在 2 秒内完成，以防过热。
- 禁止单体麦克风焊接。（否则会影响驻极体电容传声器的灵敏度）
- 最理想的散热装置按以下设计。

Every ECM contains a FET with microphone body.

This FET easy to damageable from excessive heat and electrical shock. Proper attention for the soldering work is required same as followings.

- Recommend to use 25W-35W ceramic soldering iron and apply $300\pm 10^{\circ}\text{C}$ temperature range
- Soldering should be accomplished within 2 seconds at each terminal so as not to be overheated.
- Do not make a cavity at the surface of lead lump on the PCB. wiring board.

(Opened cavity will influence to the sensitivity of ECM)

- Optimal design for heat sink pad is same as below.

