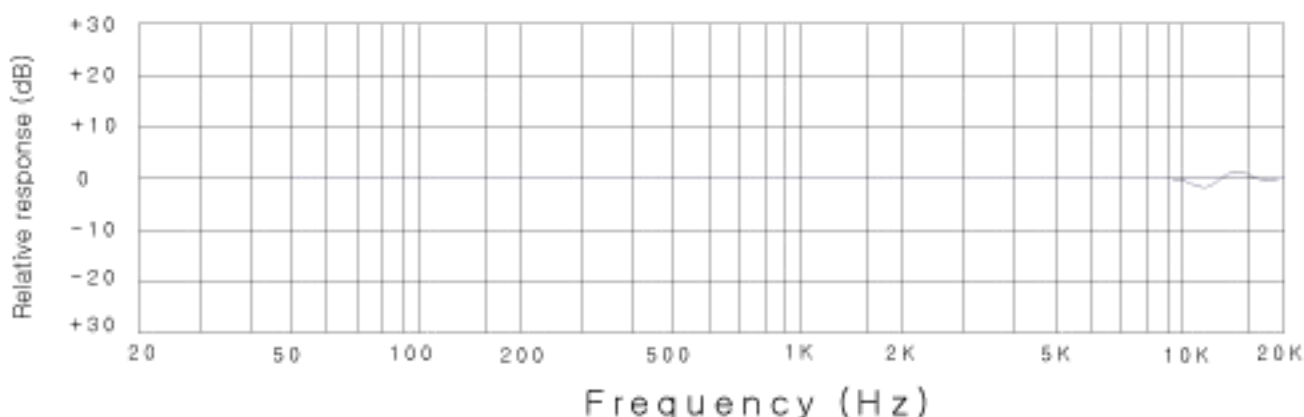


	SPECIFICATIONS	MODEL NO. JL-D622C-L-2730	SHEET 1 OF 4
	TITLE Condenser Microphone	PART NO.	

Scope: The specification describes the requirements of a digital type omni-directional condenser microphone for use in cellular phone · PDA · NB etc.

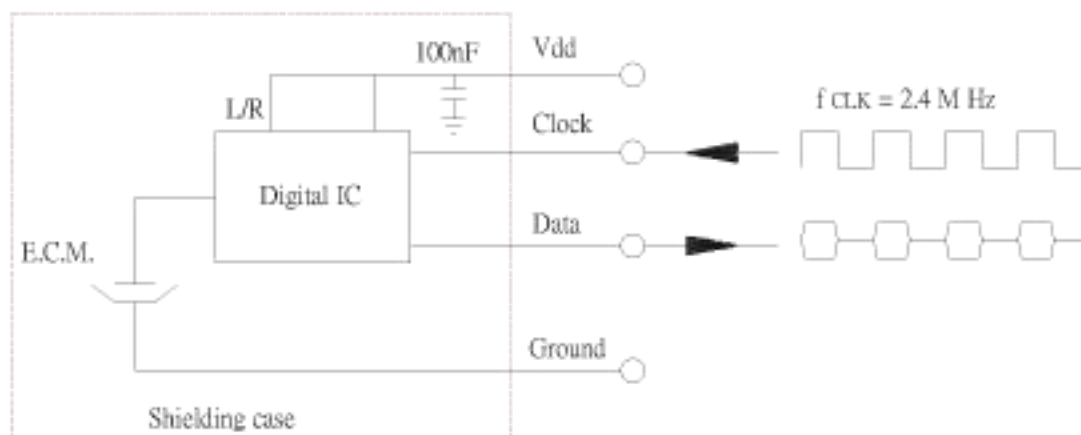
- 1 · Electrical requirements: $V_{dd}=1.8V$, $f_{CLK}=2.4M$ Hz, Duty cycle=50%
- 2-1 · Sensitivity : -27 ± 3 dBfs (0 dB = 1V/Pa, at 1K Hz)
 - 2-2 · Current consumption : Less than 500 μA
 - 2-3 · Directivity : Omni-directional
 - 2-4 · Digital noise floor : -81 dBfs (Standard)
 - 2-5 · S/N ratio : More than 58dB
 - 2-6 · Max. input sound level : 120 dB SPL (THD < 10%)
 - 2-7 · Power-up initialization : 20ms (Data invalid time)
 - 2-8 · THD + noise : Less than 5% (115dB SPL, $f_{in}=1K$ Hz)

2-8 · Frequency response:



2-9 · Operation voltage range : 1.64V ~ 3.6V

2-10 · Test circuit diagram:



APPROVED BY		'09 02 26	CHECKED BY		'09 02 26	PREPARED BY		'09 02 26
-------------	--	-----------------	---------------	--	-----------------	----------------	--	-----------------

SPECIFICATIONS

MODEL NO.
JL-D622C-L-2730SHEET
2 OF 4TITLE
Condenser Microphone

PART NO.

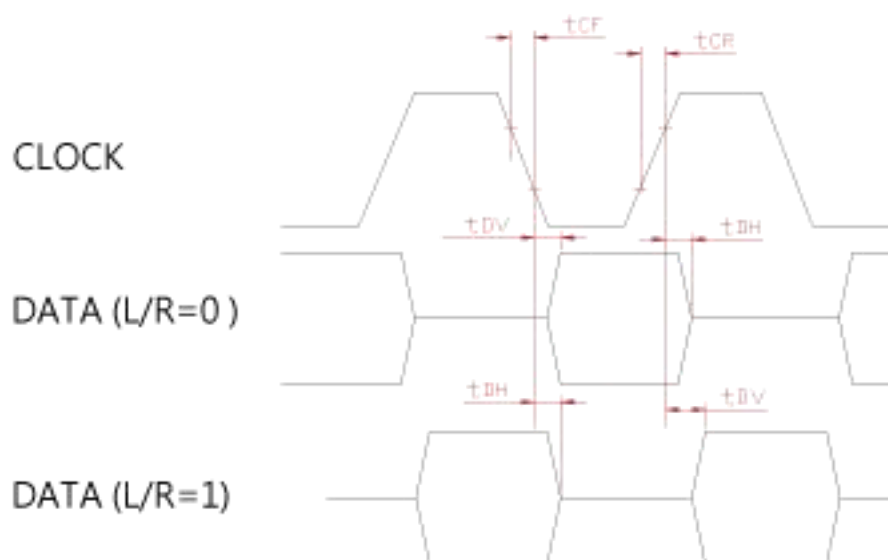
2-11、Test condition：

Power supply：V_{DD} = 1.8VClock frequency：f_{CLK} = 2.4 MHzClock jitter：σ_{clock} = 0.5ns

Bandwidth：20 Hz ~ 20K Hz

3、Digital input – output characteristic

Parameter	Symbol	Min	Typ	Max	Unit	Comments
Clock freq.(sample rate)	f _{CLK}	1	2.4	4	MHz	
Clock duty cycle	f _{DC}	40	50	60	%	
Jitter tolerance	σ			0.5	ns	
Input/output voltage low	V _{IOL}	-0.3		0.35xV _{DD}	V	
Output voltage high	V _{OH}	0.65xV _{DD}		V _{DD} +0.3	V	
Input voltage high	V _{IH}	0.65xV _{DD}		3.63	V	
Input capacitance	C _{IN}			10	pF	
Input current @ Low V	I _L	1		10	mA	Chort circuit current
Output current @ high V	I _H	1		10	mA	Short circuit current
Clock rise time	t _{CR}			10	ns	R _L =1MΩ,CL=13pF
Clock fall time	t _{CF}			10	ns	R _L =1MΩ,CL=13pF
Delay time for data valid	t _{DV}	18		40	ns	R _L =1MΩ,CL=13pF
Delay time for data high Z	t _{DH}	0		15	ns	R _L =1MΩ,CL=13pF

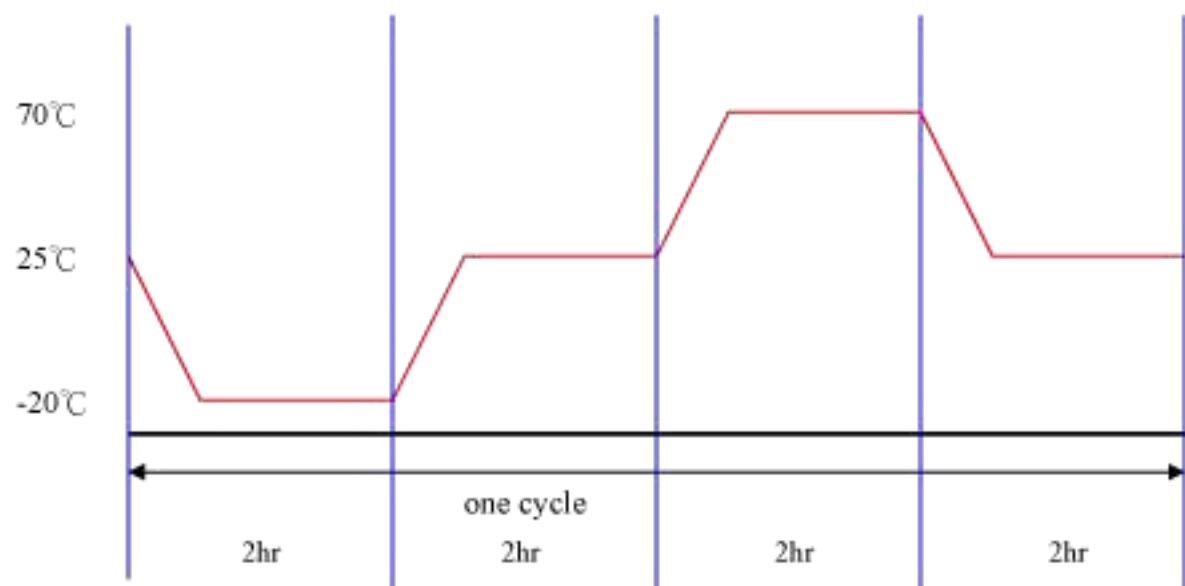


Timing diagram of CLK, L/R and DATA

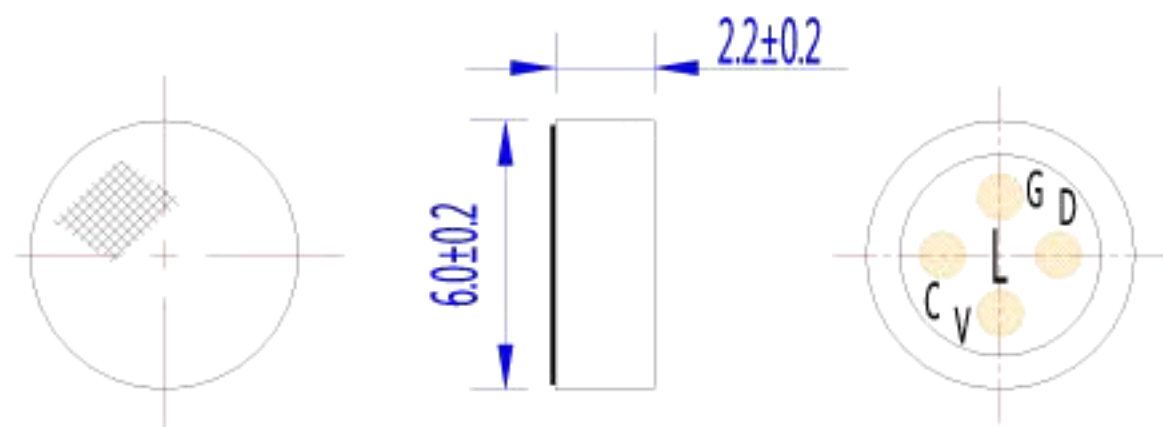
APPROVED BY

'09
02
26CHECKED
BY'09
02
26PREPARED
BY'09
02
26

		SPECIFICATIONS		MODEL NO. JL-D622C-L-2730		SHEET 3 OF 4	
		TITLE Condenser Microphone		PART NO.			
<p>4 - Mechanical requirements :</p> <p>3-1 - Dimension : $\varnothing 6 \times 2.2$ mm</p> <p>3-3 - Soldering heat shock : After soldering heat shock at $350 \pm 5^{\circ}\text{C}$ for 3 ± 1 seconds. The microphone should be without damage.</p> <p>3-4 - Terminal strength : After applied a 1 Kg force on terminal for 1 minute. The microphone should be without damage.</p> <p>3-5 - Operating temperature range : $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$</p> <p>3-6 - Storage temperature range : $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$</p>							
<p>4 - Reliability test :</p> <p>4-1 - Vibration test : After vibrations with 10Hz~55Hz , full amplitude 2mm each 3 minutes for 30 minutes at three axes. The sensitivity should be within ± 3 dB from initial value.</p> <p>4-2 - Drop test : After drop from 1 meter height to concrete floor , each 5 face for 5 times with packing. The sensitivity should be with ± 3 dB from initial value.</p> <p>4-3 - Humidity test : After exposure at $40 \pm 2^{\circ}\text{C}$ and 90%~95% humidity for 200 hours. The sensitivity should be with ± 3 dB from initial value. (The measurement should be done after 3 hours at conditioning $25 \pm 2^{\circ}\text{C}$.)</p> <p>4-4 - High temperature test : After exposure at $70 \pm 2^{\circ}\text{C}$ for 200 hours. The sensitivity should be with ± 3 dB from initial value. (The measurement should be done after 3 hours at conditioning $25 \pm 2^{\circ}\text{C}$.)</p> <p>4-5 - Low temperature test : After exposure at $-20 \pm 2^{\circ}\text{C}$ for 200 hours. The sensitivity should be with ± 3 dB from initial value. (The measurement should be done after 3 hours at conditioning $25 \pm 2^{\circ}\text{C}$.)</p> <p>4-6 - Temperature cycle test : After exposure at $-20 \pm 2^{\circ}\text{C}$ for 2 hours , at $25 \pm 2^{\circ}\text{C}$ for 2 hours , at $70 \pm 2^{\circ}\text{C}$ for 2 hours , 5 cycles. The sensitivity should be with ± 3 dB from initial value. (The measurement should be done after 3 hours at conditioning $25 \pm 2^{\circ}\text{C}$.)</p>							
APPROVED BY		'09 02 26	CHECKED BY		'09 02 26	PREPARED BY	'09 02 26



5 · Microphone dimension ·



Pin description

Mark	Pin name	Function
D	DATA	Left Mic PDM digital data output
V	VDD	Power supply
C	CLK	Clock digital input signal
G	GND	Ground