
(POKER)

Feature

- * 8 key operation : KON, KSOUND, KSCOPE, KK1-5,.
- * 3.0V operating voltage
- * Full poker game function
- * Direct drive buzzer output
- * 1/3duty, 1/2 bias LCD format

General Description

LS6107 is a poker game with direct driver buzzer output. LCD format is 1/2 bias 1/3 duty. Auto-power off function.

Functional Description

8 key operation

LS6107 has 8 key : KON, KSCOPE, KSOUND, KK1-5.

Press KSTART to start the game.

Press KSOUND toggle sound ON/OFF.

Press KSCOPE to review previous game.

Press KK1-5 to hold/unhold the cards.

Pin Assignment

DESIGNATION	TYPE	DESCRIPTION
B0, B1	OUTPUT	Buzzer output
VC1, VC2	OUTPUT	Halfer output
VEE	OUTPUT	Halfer voltage
T1, T2	INPUT	TEST pin
OO	OUTPUT	RC oscillator output
OI	INPUT	RC oscillator input
OI15P	INPUT	RC oscillator input, with input capacitor (10-15pf)
VDD	POWER	+3.0V power supply
GND	POWER	Ground
KON, K SOUND, KSCOPE KK1, KK2, KK3, KK4, KK5	INPUT(PH)	Input key
PB	INPUT(PH)	Power up reset
C[1:3]	OUTPUT	LCD Common output
S[1:28]	OUTPUT	LCD Segment output

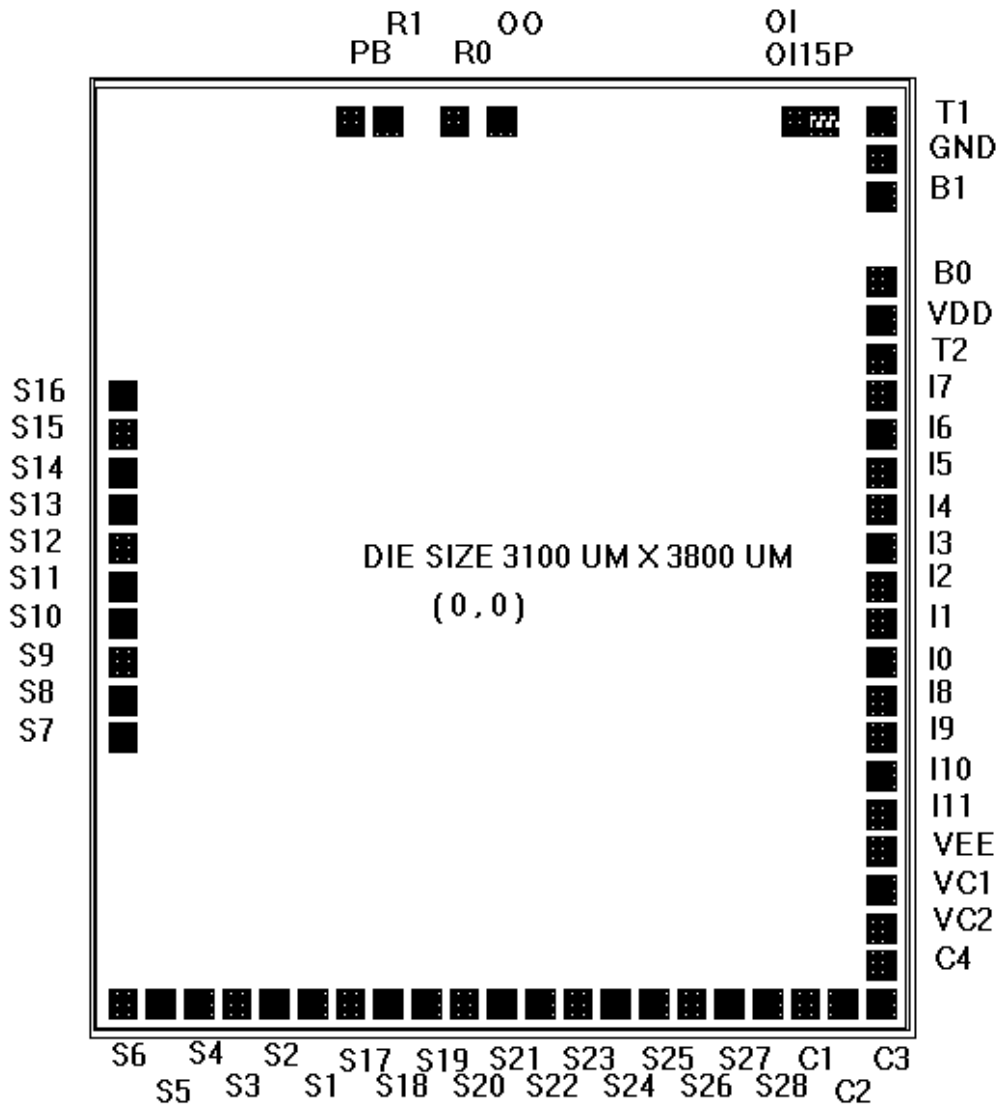
Note: (PH) - pull high;

DC Characteristic

(GND = 0V, Vdd = 3.0V, Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Supply Voltage	Vdd	2.4	3.0	3.6	V	
Operating current	Idd	-	20	50	μA	No load
Oscillator Frequency	Fosc	25k	-	40k	Hz	Vdd=3.0
Buzzer output current	Ib	500	-	-	μA	Vbd-Vss=0.5
LCD frequency	Flcd	-	64	-	Hz	
Segment current	Is	0.15	-	-	μA	Vseg=0.2V
Common current	Ic	3.0	-	-	μA	Vcom=0.2V

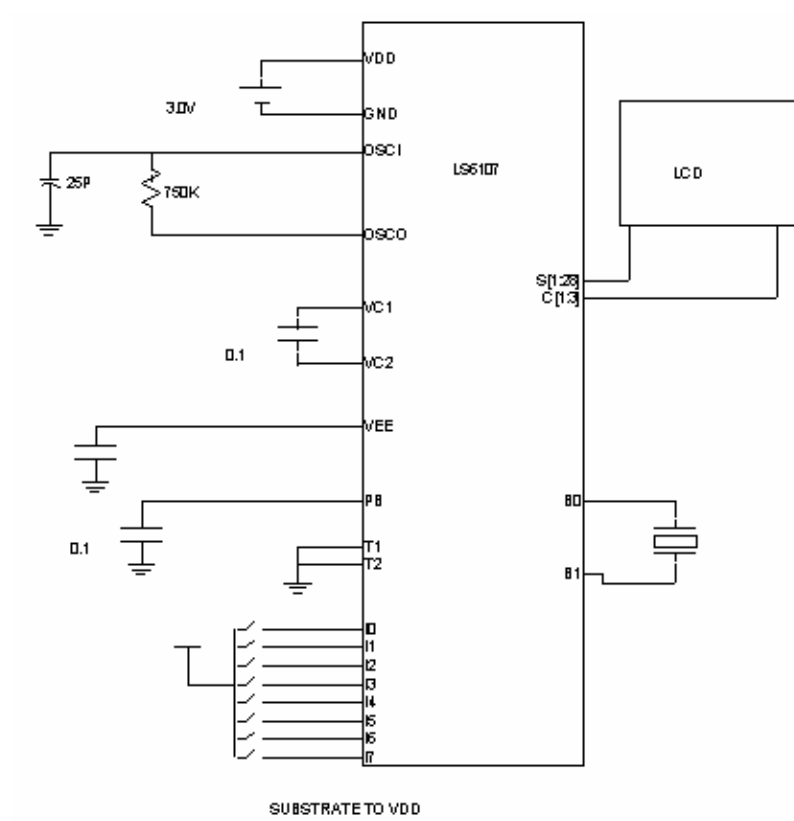
Bonding Pad



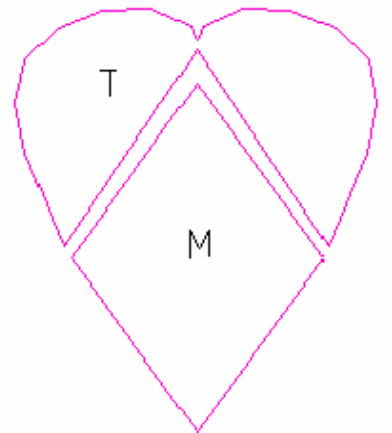
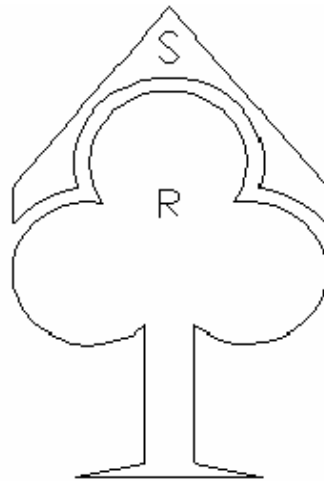
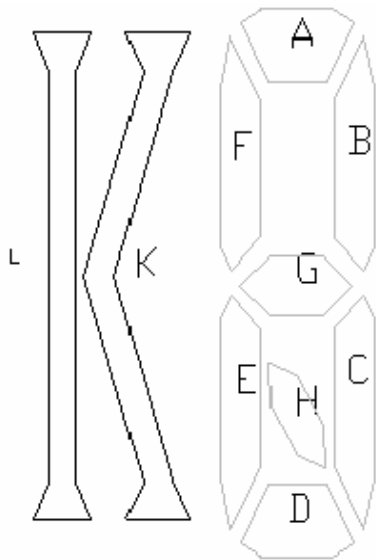
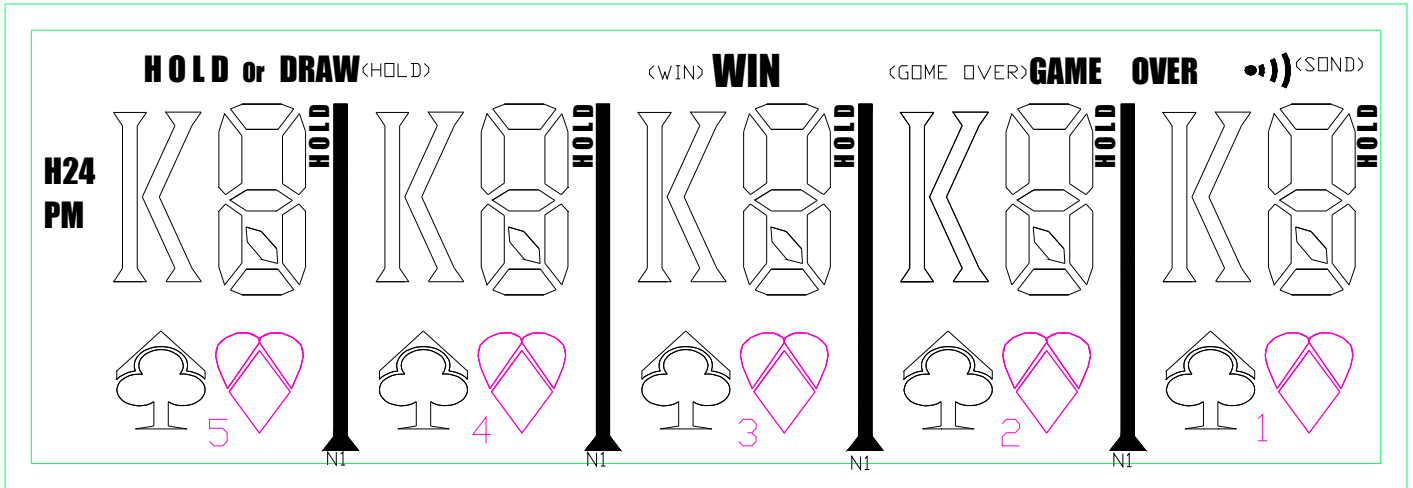
Pad location

PAD	X(μ m)	Y(μ m)	PAD	X(μ m)	Y(μ m)
S1	-724.8	-1853.0	GND	1387.0	1540.0
S2	-923.0	-1853.0	B1	1387.0	1383.0
S3	-1055.0	-1853.0	B0	1387.0	1074.0
S4	-1193.0	-1853.0	VDD	1387.0	932.0
S5	-1326.0	-1853.0	T2	1387.0	792.0
S6	-1462.0	-1853.0	I7(KK5)	1387.0	623.0
S7	-1849.0	-228.0	I6(KK4)	1387.0	473.0
S8	-1849.0	-920.0	I5(KK3)	1387.0	327.0
S9	-1849.0	420.0	I4(KK2)	1387.0	177.0
S10	-1849.0	174.0	I3(KK1)	1387.0	310.0
S11	-1849.0	305.0	I2(KSCOPE)	1387.0	-111.0
S12	-1849.0	438.0	I1(KSOUND)	1387.0	-264.0
S13	-1849.0	573.0	I0(KON)	1387.0	-417.0
S14	-1849.0	705.0	I8	1387.0	-576.0
S15	-1849.0	842.0	I9	1387.0	-726.0
S16	-1849.0	979.0	I10	1387.0	-857.0
PB	-590.0	1749.0	I11	1387.0	-1025.0
R0	-850.0	1749.0	VEE	1387.0	-1234.0
R1	-457.0	1749.0	VC1	1387.0	-1367.0
OO	640.0	1749.0	VC2	1387.0	-1503.0
OI	1144.0	1749.0	C4	1387.0	-1636.0
OI15P	1260.0	1749.0	C3	1343.0	-1853.0
T1	1383.0	1749.0	C2	1210.0	-1853.0
			C1	1081.0	-1853.0
			S28	948.0	-1853.0
			S27	816.0	-1853.0
			S26	684.0	-1853.0
			S25	546.0	-1853.0
			S24	412.0	-1853.0
			S23	280.0	-1853.0
			S22	146.0	-1853.0
			S21	120.0	-1853.0
			S20	-123.0	-1853.0
			S19	-258.0	-1853.0
			S18	-392.0	-1853.0
			S17	-589.0	-1853.0

Application Circuit



LCD Drawing



PIN	SIG	C1	C2	C3
1	C3			C3
2	C2		C2	
3	C1	C1		
4	S28	HOLD	H24	PM
5	S24	5L	5K	5S
6	S23	5f	5e	5T
7	S22	5a	5g	5d
8	S21	5b	5c	5h
9	S27	5HOLD	5M	5R
10	S20	4L	4K	4S
11	S19	4f	4e	4T
12	S18	4a	4g	4d
13	S17	4b	4c	4h
14	S26	4HOLD	4M	4R
15	S10	WIN	N1	
16	S1	3L	3K	3S
17	S2	3f	3e	3T
18	S3	3a	3g	3d
19	S4	3b	3c	3h
20	S25	3HOLD	3M	3R
21	S5	2L	2K	2S
22	S6	2f	2e	2T
23	S7	2a	2g	2d
24	S8	2b	2c	2h
25	S9	2HOLD	2M	2R
26	S11	GAME_OVER	SOUND	
27	S13	1L	1K	1S
28	S14	1f	1e	1T
29	S15	1a	1g	1d
30	S16	1b	1c	1h
31	S12	1HOLD	1M	1R

Revision History : (0.1=>0.2) Modification of Application Circuit (08.02.01)