

## ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Test Conditions	MIN	TYP	MAX	Unit	Note
Input Voltage 1	$V_{IH1}$		$V_{GG}-0.4$			V	1
	$V_{IL1}$				0.4		
Input Voltage 2	$V_{IH2}$		$V_{GG}-0.4$			V	2
	$V_{IL2}$				0.2		
Input Current 1	$I_{IH1}$	$V_{IN} = V_{GG}$			1	$\mu A$	3
	$I_{IL1}$	$V_{IN} = 0V$	0.3	1	3		
Input Current 2	$I_{IH2}$	$V_{IN} = V_{GG}$			1	$\mu A$	4
	$I_{IL2}$	$V_{IN} = 0V$			1		
Input Current 3	$I_{IH3}$	$V_{IN} = V_{GG}$	0.3	1	3	$\mu A$	2
	$I_{IL3}$	$V_{IN} = 0V$					
Input Current 4	$I_{IH4}$	$V_{IN} = V_{GG}$	3	2	25	$\mu A$	2
	$I_{IL4}$	$V_{IN} = 0V$					
Output Voltage 1	$V_{OH1}$	without load	$V_{GG}-0.15$			V	5
	$V_{OL1}$	load = $15\mu A$			0.15		
Output Voltage 2	$V_{OA}$	without load	2.80	95		V	6
	$V_{OB}$	without load	1.30	50	1.70		
	$V_{OC}$	without load		3	0.20		
Display Frequency	$F_d$	$V_{GG} = 1.3V$ while display is on	50	5		Hz	6
Dissipation	$I_{OFF}$	Display off			0.1	$\mu A$	7
	$I_{DIS}$	$V_{GG} = 1.3V$ while display is on		5	3.5		8

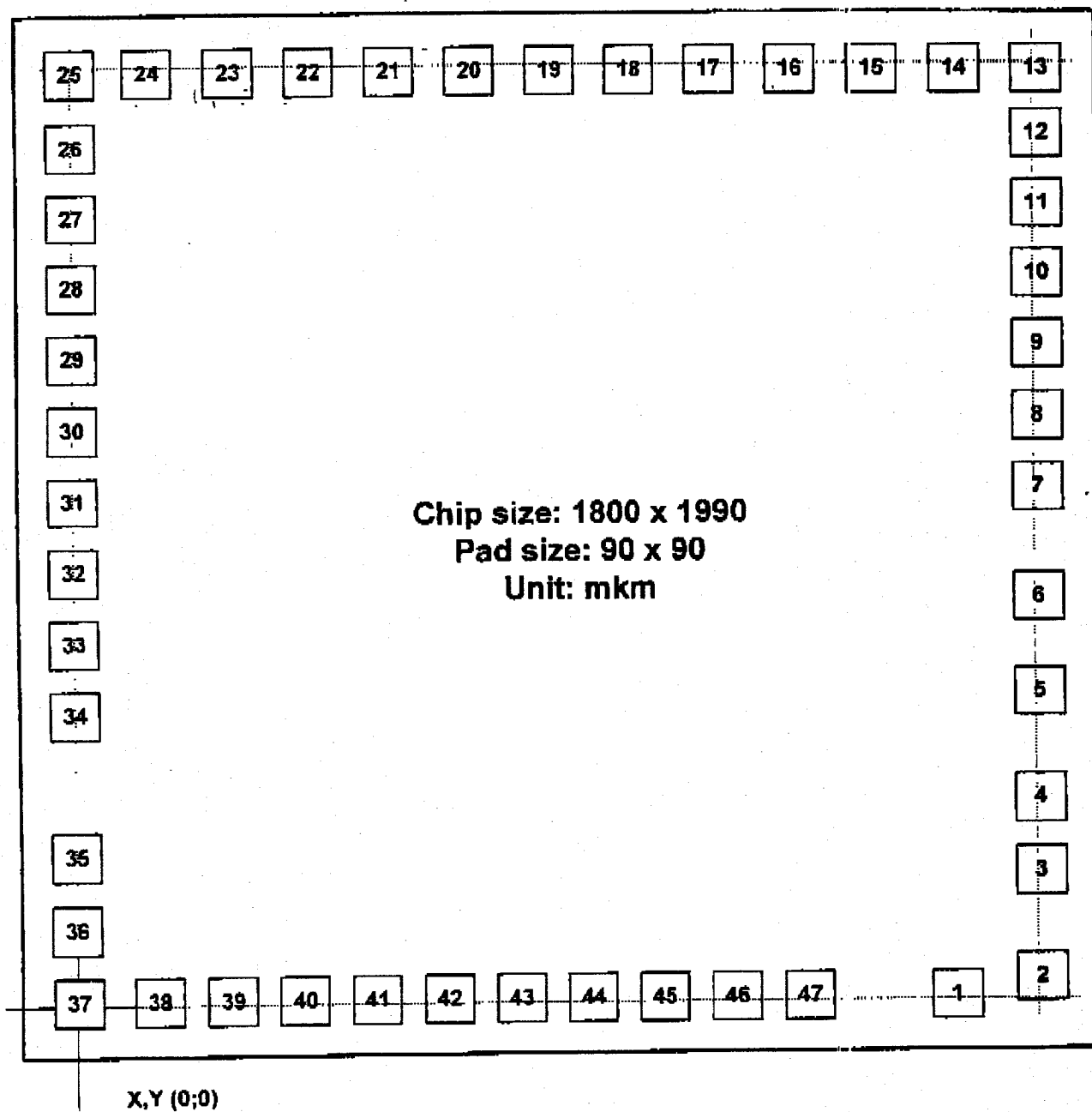
## NOTE:

1. Applies to Pins K2~K6 and S2.
2. Applies to Pin S1.
3. Applies to Pins K2~K6.
4. Applies to Pin S2.
5. Applies to P1, P2, A2~A5.
6. Applies to H1~H3, a1-a8, b1-b8, c1~c8.
7. Measured by the next test circuit while "0" is being displayed after auto-clear operation and while key is not being depressed.
8. Measured by the next circuit while operation is being made by ON/C key and while key is being depressed.

## PAD DESCRIPTION

Pad N°	Signal	I/O	Description	Pad N°	Signal	I/O	Description
1	FODIS	I	F <sub>osc</sub> Disable	25	b3	O	Display Output
2	EXTNL	I	External Clock	26	a3	O	Display Output
3	VB	O	Capacitor terminal for Voltage set-up	27	c2	O	Display Output
4	VA	O	Capacitor terminal for Voltage set-up	28	b2		Display Output
5	VC	O	Capacitor terminal for Voltage set-up	29	a2	O	Display Output
6	GND		Ground	30	c1	O	Display Output
7	H3	O	Display Output	31	b1	O	Display Output
8	H2	O	Display Output	32	a1	O	Display Output
9	c8	O	Display Output	33	H1	O	Display Output
10	b8	O	Display Output	34	V <sub>GG</sub>	I	Power Supply
11	a8	O	Display Output	35	V <sub>OP</sub>	I	Option Pin
12	c7	O	Display Output	36	V <sub>SB</sub>	I	Solar Battery
13	b7	O	Display Output	37	K4	I	Key Input
14	a7	O	Display Output	38	K6	I	Key Input
15	c6	O	Display Output	39	K5	I	Key Input
16	b6	O	Display Output	40	P1	O	Strobe output
17	a6	O	Display Output	41	P2	O	Strobe output
18	c5	O	Display Output	42	A5	O	Strobe output
19	b5	O	Display Output	43	A4	O	Strobe output
20	a5	O	Display Output	44	A3	O	Strobe output
21	c4	O	Display Output	45	A2	O	Strobe output
22	b4	O	Display Output	46	K2	I	Key Input
23	a4	O	Display Output	47	K3	I	Key Input
24	c3	O	Display Output				

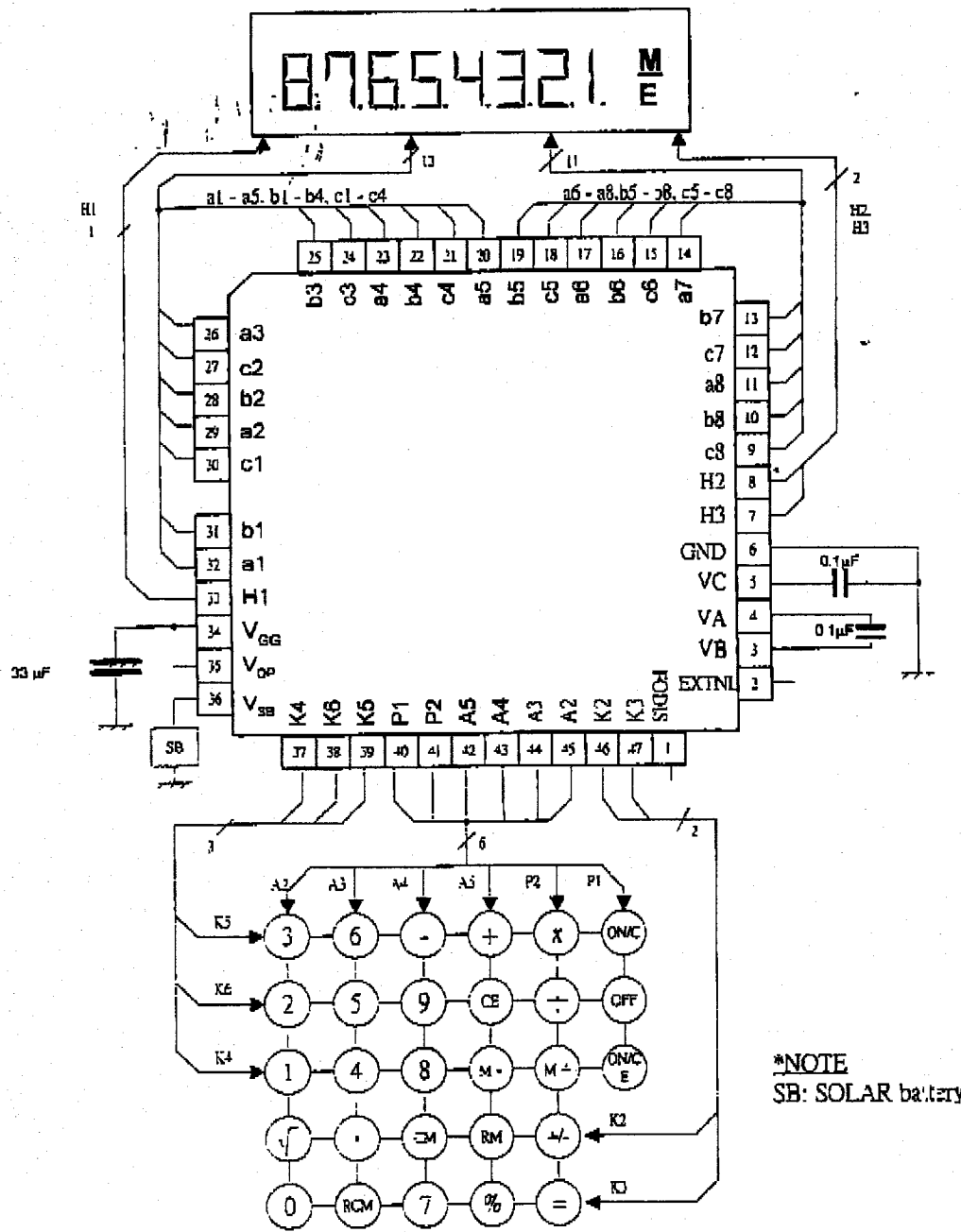
# PAD DIAGRAM



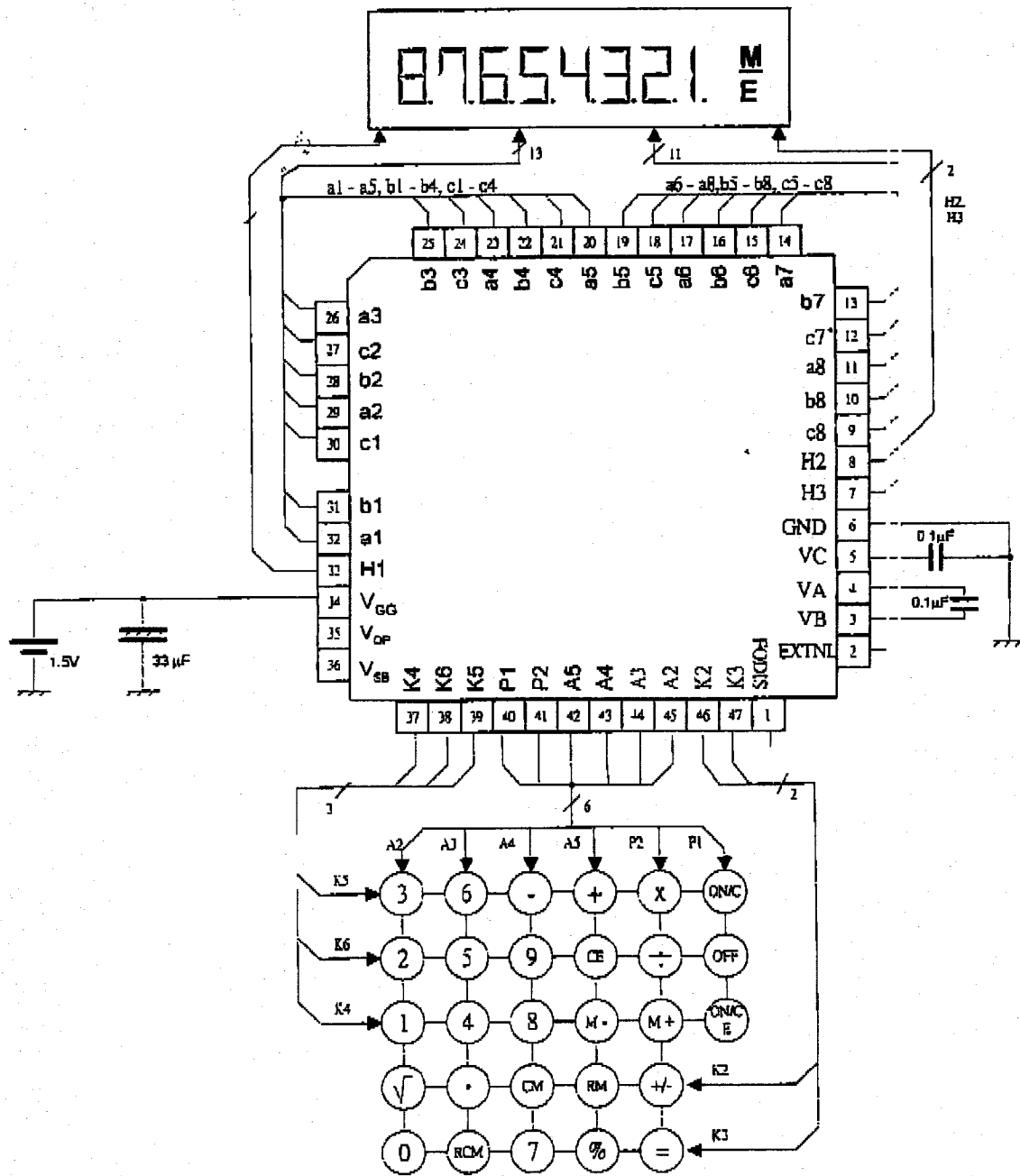
## PAD LOCATION

Pad number	Pad name	X	Y	Pad number	Pad name	X	Y
1	FODIS	1417	0	25	b3	0	1738
2	EXTNL	1548	25	26	a3	0	1606
3	VB	1548	181	27	c2	0	1474
4	VA	1548	337	28	b2	0	1341
5	VC	1548	584	29	a2	0	1209
6	GND	1548	763	30	c1	0	1077
7	H3	1548	946	31	b1	0	945
8	H2	1548	1078	32	a1	0	812
9	c8	1548	1210	33	H1	0	680
10	b8	1548	1342	34	V <sub>CC</sub>	0	548
11	a8	1548	1474	35	VOP	0	265
12	c7	1548	1606	36	VSB	0	132
13	b7	1548	1738	37	K4	0	0
14	a7	1420	1738	38	K6	129	0
15	c6	1292	1738	39	K5	258	0
16	b6	1164	1738	40	P1	335	0
17	a6	1036	1738	41	P2	515	0
18	c5	908	1738	42	A5	644	0
19	b5	780	1738	43	A4	773	0
20	a5	652	1738	44	A3	902	0
21	c4	524	1738	45	A2	1030	0
22	b4	396	1738	46	K2	1159	0
23	a4	265	1738	47	K3	1288	0
24	c3	131	1738				

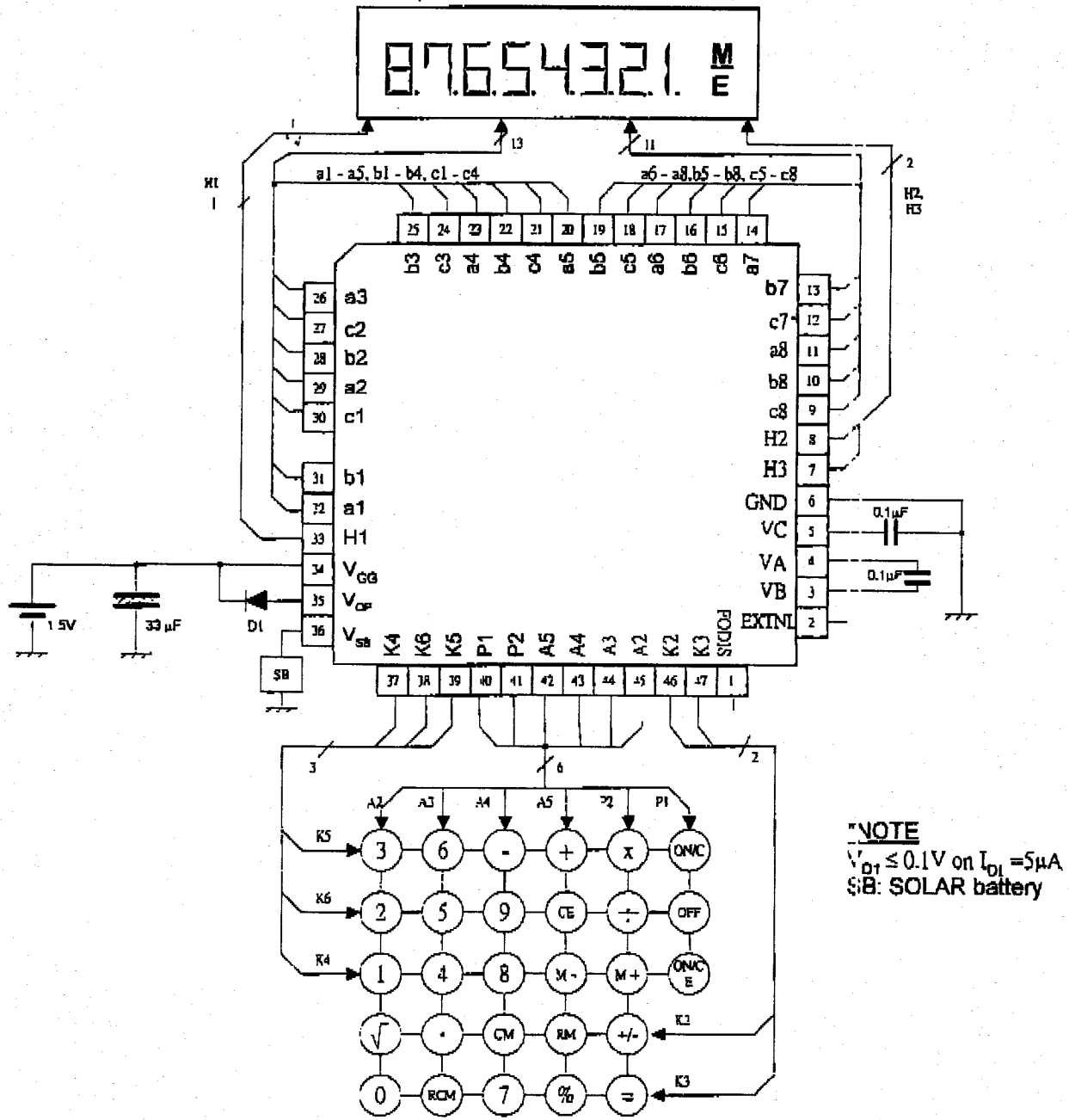
### APPLICATION CIRCUIT (for use with a solar battery)



# APPLICATION CIRCUIT (for use with a cell)



APPLICATION CIRCUIT (for use with a double power)



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