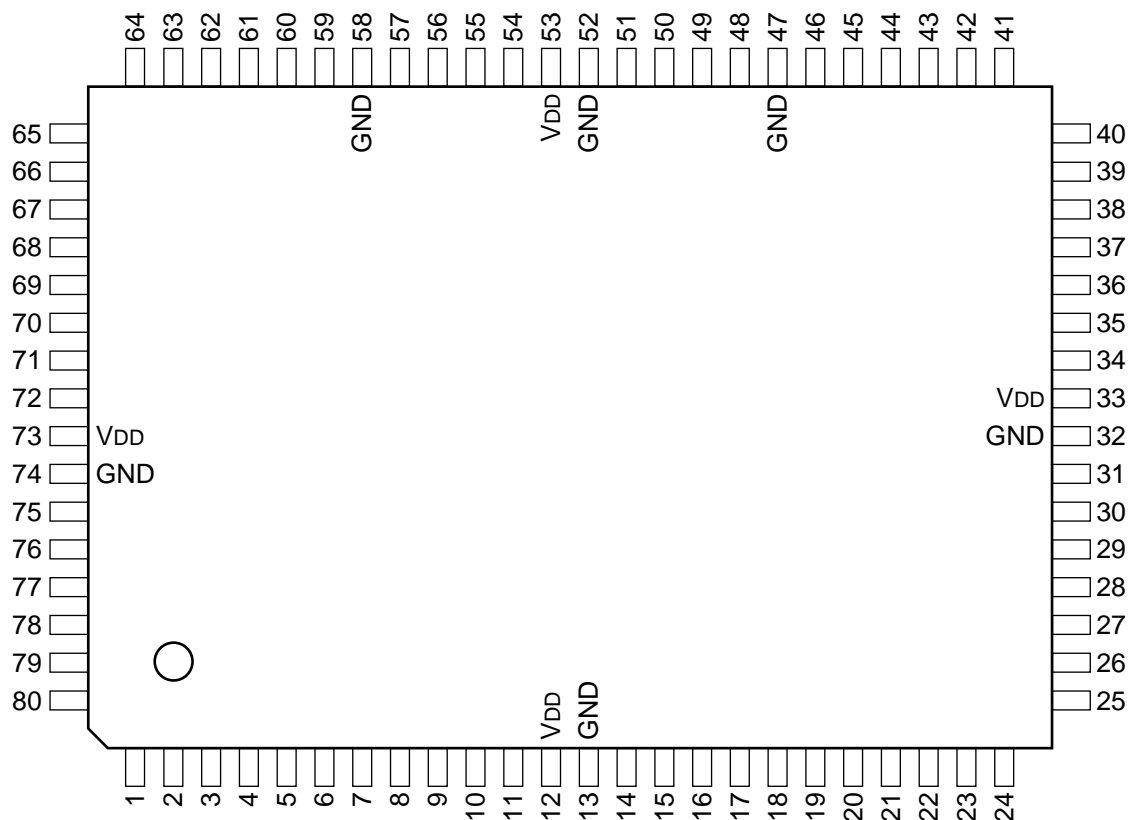


## MATRIX/ENCODER

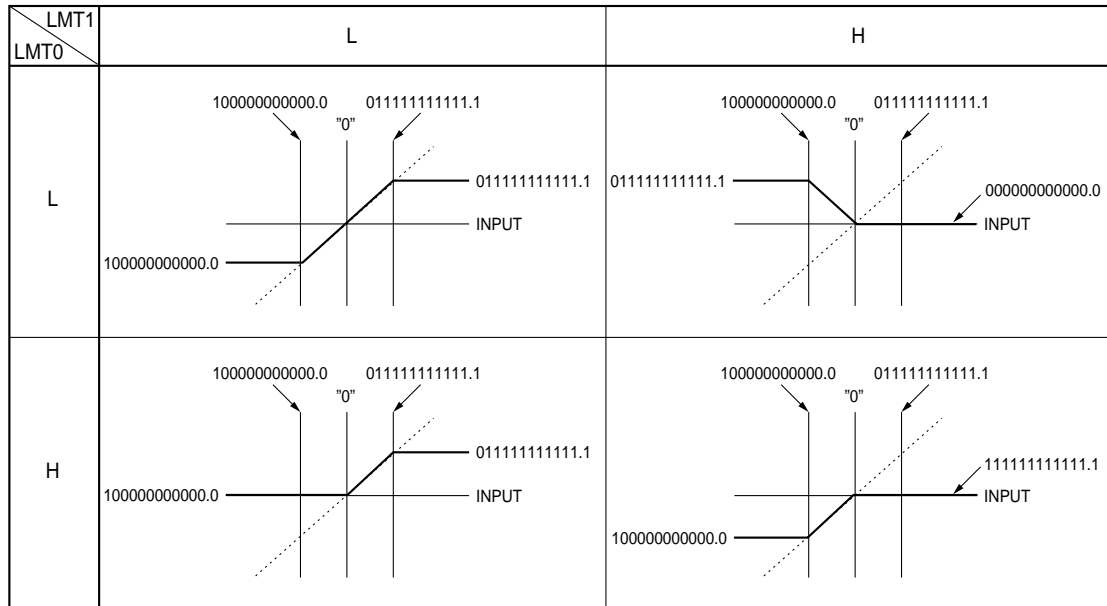
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	Q12	21	I	I7	41	I	Y2	61	I	LMT0
2	I	Q11	22	I	I6	42	I	Y1	62	I	LMT1
3	I	Q10	23	I	I5	43	O	P0	63	I	RND
4	I	Q9	24	I	I4	44	O	P1	64	I	SMPL
5	I	Q8	25	I	I3	45	O	P2	65	O	TSTO
6	I	Q7	26	I	I2	46	O	P3	66	I	TSTI
7	I	Q6	27	I	I1	47	—	GND	67	I	CKX
8	I	Q5	28	I	I0	48	O	P4	68	I	RST
9	I	Q4	29	I	Y12	49	O	P5	69	I	CS
10	I	Q3	30	I	Y11	50	O	P6	70	I/O	SDAT
11	I	Q2	31	I	Y10	51	O	P7	71	I	SADD
12	—	VDD	32	—	GND	52	—	GND	72	I	CKD
13	—	GND	33	—	VDD	53	—	VDD	73	—	VDD
14	I	Q1	34	I	Y9	54	O	P8	74	—	GND
15	I	Q0	35	I	Y8	55	O	P9	75	I	CK
16	I	I12	36	I	Y7	56	O	P10	76	I	SC
17	I	I11	37	I	Y6	57	O	P11	77	I	LALT
18	I	I10	38	I	Y5	58	—	GND	78	I	MODE0
19	I	I9	39	I	Y4	59	O	P12	79	I	MODE1
20	I	I8	40	I	Y3	60	I	OE	80	I	MODE2

**INPUTS**

- CK ; SYSTEM CLOCK
- CKD ; SERIAL INTERFACE CLOCK
- CKX ; SWITCHING TIMING PULSE
- CS ; CHIP SELECT (LOW : ACTIVE)
- I0 - I12 ; I IN (2'S COMPLEMENT 12.1 BIT)
- LALT ; LINE ALTERNATE PULSE  
<FOR D II PAL>  
(HIGH : EVEN, LOW : ODD)  
<FOR D II NTSC>  
(HIGH : CONTINUOUS)
- LMT0, LMT1 ; P OUTPUT LIMITER MODE CONTROL



**MODE0 - MODE2 ; MODE SELECT**

MOD2	MOD1	MOD0	MODE AND FUNCTION
0	0	0	MATRIX, $P = (Y+a) \times d + (I+b) \times e + (Q+C) \times f + g$
0	0	1	NOT USED
0	1	0	ROTATION I, $P = (Y+a) \times d + (I+b) \times e + (Q+C) \times (-f) + g$
0	1	1	ROTATION II, $P = (Y+a) \times d + (I+C) \times f + (Q+b) \times e + g$
1	0	0	NOT USED
1	0	1	NOT USED
1	1	0	ENCODER (NTSC)
1	1	1	ENCODER (PAL)

0 ; LOW LEVEL  
1 ; HIGH LEVEL

a, b, c, ...g ; REGISTER DATA FROM SERIAL DATA

- OE ; P OUTPUT ENABLE CONTROL (LOW : ENABLE)
- Q0 - Q12 ; Q IN (2'S COMPLEMENT 12.1 BIT)
- RND ; ROUNDING P OUTPUT CONTROL (HIGH : ACTIVE)
- RST ; RESET PULSE (LOW : RESET SERIAL I/F)
- SADD ; SERIAL ADDRESS
- SC ; SUBCARRIER IN
- SMPL ; SAMPLING PULSE FOR P OUTPUT (┘)
- TSTI ; TEST MODE CONTROL (HIGH : TEST MODE)
- Y1 - Y12 ; Y IN (2'S COMPLEMENT 12.0 BIT)

**OUTPUTS**

- P0 - P12 ; P OUT (2'S COMPLEMENT 12.1 BIT)
- TSTO ; TEST

**INPUT/OUTPUT**

- SDAT ; SERIAL DATA

