

# SAA1006

## DIODE MATRIX ENCODER

The SAA 1006 provides a 16 line to 4-bit binary encoding for general purpose applications.

It is also suitable to be used in conjunction with the remote control receiver MC6525, MC6526, MC6527, MC6529 for local instruction encoding.

## DIODE MATRIX ENCODER

SILICON MONOLITHIC  
INTEGRATED CIRCUIT



PLASTIC PACKAGE  
CASE 648

### MAXIMUM RATINGS ( $T_A = +25^\circ\text{C}$ )

Rating	Symbol	Value	Unit
Forward Current per Pin	$I_F$	20	mAdc
Reverse Voltage all Pins	$V_R$	6,5	Vdc
Operating Temperature Range	$T_A$	0 to +70	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^\circ\text{C}$ )

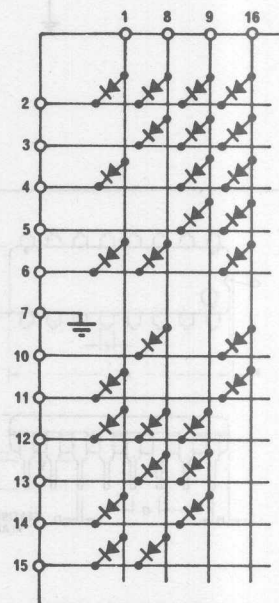
Characteristics	Symbol	Min.	Typ.	Max.	Unit
Reverse Current per Pin @ $V_R = 6.0\text{ V}$	$I_R$			30	$\mu\text{A}$
Forward Voltage Drop per Pin @ $I_F = 2.0\text{ mA}$	$V_F$			1	Volt

### FUNCTIONAL TRUTH TABLE

OUTPUT PINS	INPUT PINS <sup>1</sup>															
	2	3	4	5	6	10	11	16	12	13	14	9	15	8	1	all open
1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
8	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
9	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
16	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

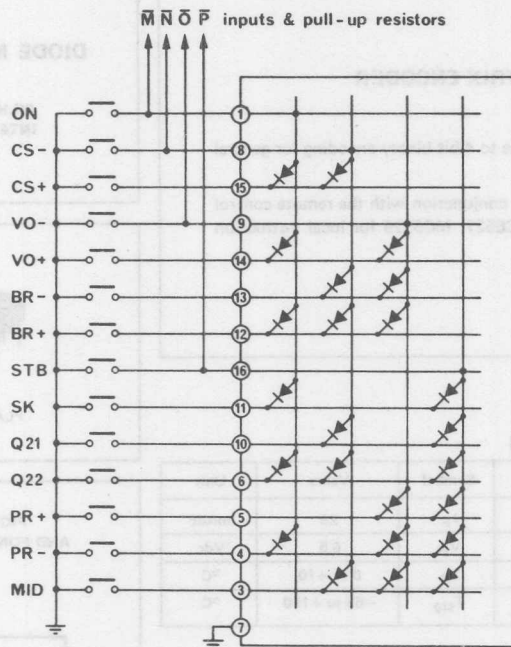
<sup>1</sup>One pin at a time to be grounded.

FIGURE 1 - PINOUT  
AND FUNCTIONAL SCHEMATIC

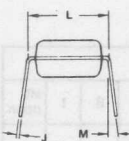
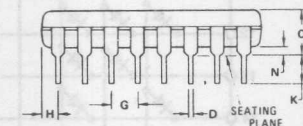
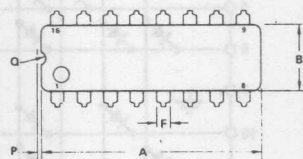


APPLICATION INFORMATION

When used in conjunction with the remote control receivers MC6525/6/7/9 it will encode the following commands.



PACKAGE DIMENSIONS



- NOTES:
- LEADS WITHIN 0.13 mm (0.005) RADIUS OF TRUE POSITION AT SEATING PLANE AT MAXIMUM MATERIAL CONDITION.
  - DIMENSION "L" TO CENTER OF LEADS WHEN FORMED PARALLEL

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	20.70	21.34	0.815	0.840
B	6.10	6.60	0.240	0.260
C	4.06	4.57	0.160	0.180
D	0.38	0.51	0.015	0.020
F	1.02	1.52	0.040	0.060
G	2.54 BSC		0.100 BSC	
H	1.32	1.83	0.052	0.072
J	0.20	0.30	0.008	0.012
K	2.92	3.43	0.115	0.135
L	7.37	7.87	0.290	0.310
M	10°		10°	
N	0.51	1.02	0.020	0.040
P	0.13	0.38	0.005	0.015
Q	0.51	0.76	0.020	0.030