

7-SEGMENT DECODER DRIVER

Technology: Bipolar

Features:

- o Display numbers from 1 to 16
- o Supply voltage $-V_S = 12\text{ V}$
- o Output currents
 $-I_{O1} \dots -I_{O9} = 10\text{ mA}$
- o Input code BCD + 1
- o Pull-up resistors $50\text{ k}\Omega$ to V_S
- o Separate input for dark switching

Case:

16 pin dual inline plastic

Absolute maximum ratings

Supply voltage range	Pin 16	V_S	-13.5 ... +0.3	V
Supply current	Pin 1	I_S	150	mA
Output current of one output	Pin 7...15	$-I_{O1} \dots -I_{O9}$	50	mA
Total power dissipation $-I_{O1} \dots -I_{O9}$ à 10 mA = 90 mA				
$-V_{O1} \dots -V_{O9} = 2\text{ V}$,				
$T_{\text{amb}} = 70\text{ }^\circ\text{C}$		P_{tot}	220	mW

T1.2/1799.0489 E

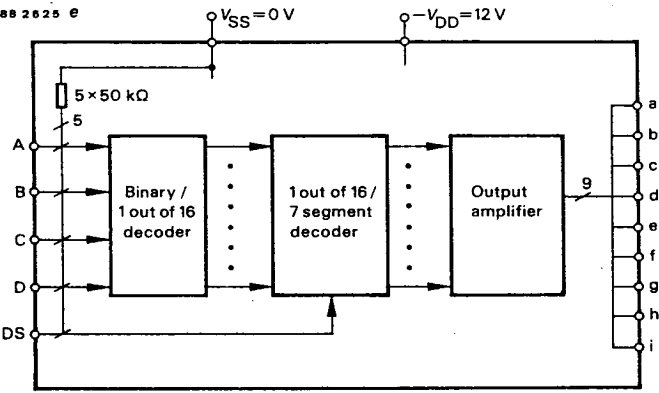


Fig. 1 Block diagram

Electrical characteristics

-V_S = 12 V, reference point pin 1,
T_{amb} = 25 °C, unless otherwise specified

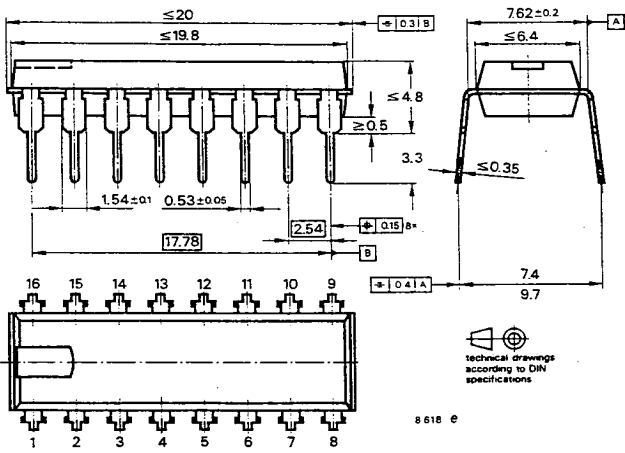
			Min.	Typ.	Max.	
Supply voltage	Pin 16	-V _S	10.8	12	13.2	V
Supply quiescent current	Pin 1	I _{SB}			1.5	mA
Output reverse current -V _O = 13.2 V, T _{amb} = 70 °C	Pin 7...15	-I _{OR}			50	μA
Output voltage level	Pin 7...15					
Logic "0"		-V _{OH}			2.0	V
Logic "1"		-V _{OL}	10.8			V
Output current -V _{OH} = 2 V, T _{amb} = 25 °C	Pin 7...15	-I _O	12			mA
T _{amb} = 70 °C	Pin 7...15	-I _O	10			mA
Input voltage level	Pin 2...6					
Logic "0"		V _{IH}	-0.3		+1	V
Logic "1"		-V _{IL}	13.2		4.0	V
Input currents	Pin 2...6					
-V _{IL} = 4.0 V		-I _{IL}			120	μA
-V _{IH} = 1.0 V		-I _{IH}	10			μA

Truth table

Number displayed	Inputs					Outputs								
	D	C	B	A	DS	a	b	c	d	e	f	g	h	i
1	L	L	L	L	H	L	H	H	L	L	L	L	L	L
2	L	L	L	H	H	H	H	L	H	H	L	H	L	L
3	L	L	H	L	H	H	H	H	H	L	L	H	L	L
4	L	L	H	H	H	L	H	H	L	L	H	H	L	L
5	L	H	L	L	H	H	L	H	H	L	H	H	L	L
6	L	H	L	H	H	H	L	H	H	H	H	H	L	L
7	L	H	H	L	H	H	H	H	L	L	L	L	L	L
8	L	H	H	H	H	H	H	H	H	H	H	H	L	L
9	H	L	L	L	H	H	H	H	H	L	H	H	L	L
10	H	L	L	H	H	H	H	H	H	H	H	L	H	H
11	H	L	H	L	H	L	H	H	L	L	L	L	H	H
12	H	L	H	H	H	H	H	L	H	H	L	H	H	H
13	H	H	L	L	H	H	H	H	H	L	L	H	H	H
14	H	H	L	H	H	L	H	H	L	L	H	H	H	H
15	H	H	H	L	H	H	L	H	H	L	H	H	H	H
16	H	H	H	H	H	H	L	H	H	H	H	H	H	H
dark	X	X	X	X	L	L	L	L	L	L	L	L	L	L

U 143 M

Dimensions in mm



Case
JEDEC MO 001
DIP 16-leads