

F-P ELECTRONICS

FP2800A Decoder Driver

The FP2800A Decoder Driver is a 40 pin integrated circuit which provides the decoding to select one of 28 high current driver outputs for sinking and sourcing current. A complementary driver is available for bridge output applications. The CMOS compatible data inputs are grouped to allow one of four 7-segment displays to be addressed. A DATA pin sets the output to source or sink mode and the output is activated for the duration of an ENABLE signal.

FEATURES:

- Operates up to 27.3 volts D.C.
- Source and sink up to 370 mA
- Low saturation devices
- Internal clamping diodes for inductive loads
- Microprocessor compatible inputs

APPLICATIONS:

- Driving 1" (25mm) 7 segment modules for gas pump readouts
- Driving 1" (25mm) 7 segment modules and 35 disk matrix XY5 series modules in panel configurations
- Driving 1" (25mm) 7 segment modules for parking meter readouts
- Driving 1" (25mm) 7 segment modules, 35 disk matrix XY5, and 35 disk matrix XY7 series modules for general pricing and general message applications

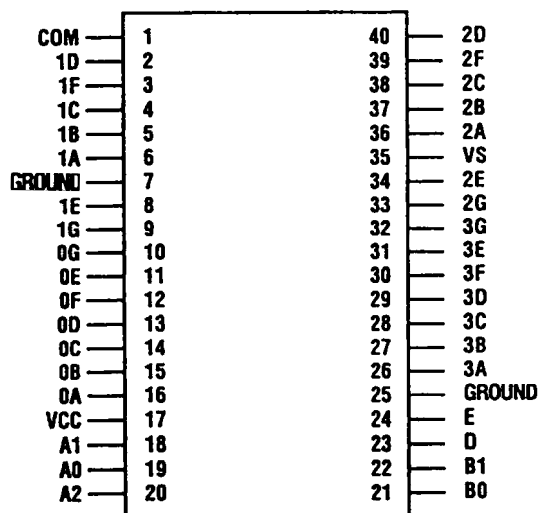


RECOMMENDED OPERATING CONDITIONS				
	MIN	NORMAL	MAX	UNITS
Logic supply voltage, V_{CC}	4.5	5	5.5	V
Power supply voltage, V_s		26	27.5	V
Power supply current, I_s		350	370	mA
Operating temperature range	-40		80	°C
Duty cycle of the circuit, at 80°C, at 25°C			25 50	%
Operating Frequency	5			Hz

ABSOLUTE MAXIMUM RATINGS		
Logic supply voltage	V_{CC}	7V
Input voltage	V_{IN}	6V
Power supply voltage	V_s	30V
Power supply current	I_s	500mA
Operating temperature	TA	-40°C to 80°C

ELECTRICAL CHARACTERISTICS OVER RECOMMENDED OPERATING TEMPERATURE RANGE					
	TEST CONDITION	MIN	TYP.	MAX	UNITS
V_{IH} High Level Input Voltage	$V_{CC} = 5V$	2			V
V_{IL} Low Level Input Voltage	$V_{CC} = 5V$			0.8	V
I_{IH} High Level Input Current	$V_{CC} = 5V$ $V_{IN} = 5V$			1	µA
I_{IL} Low Level Input Current	$V_{CC} = 5V$ $V_{IN} = 0V$		1	-10	µA
Other Inputs			46	-60	µA
I_{CC} Logic Current	$V_{CC} = 5V$	2.0	6.6	10	mA
I_{OH} Off State Driver Power Supply Current	$V_s = 26V$ $E = 0V$			1	mA
I_{OL} Output Leakage	$V_s = 27.5V$, $E = 0V$ All output shorted to $V_s = 26$			1.0	mA
VSAT Output Saturation Voltage	$I_L = 350mA$ Source Trans. Sink Trans.			3.0 2.0	V

SWITCHING CHARACTERISTICS	MAX.	UNITS
t_{ON} Turn On Time for any Output See Fig 3	50	USEC
t_{OFF} Turn Off Time for any Output See Fig 3	150	USEC
t_{SE} Output Select Time See Fig 2	50	USEC



PIN ASSIGNMENT (TOP VIEW)

ENABLE E	INPUTS					COM OCOM	OUTPUTS																											
	DIGIT		SEGMENT				DIGIT 0							DIGIT 1							DIGIT 2							DIGIT 3						
	B1	B0	A2	A1	A0	Q0A	Q0B	Q0C	Q0D	Q0E	Q0F	Q0G	Q1A	Q1B	Q1C	Q1D	Q1E	Q1F	Q1G	Q2A	Q2B	Q2C	Q2D	Q2E	Q2F	Q2G	Q3A	Q3B	Q3C	Q3D	Q3E	Q3F	Q3G	
X	X	X	X	X	X																													
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