

8CH HIGH-VOLTAGE SOURCE DRIVER

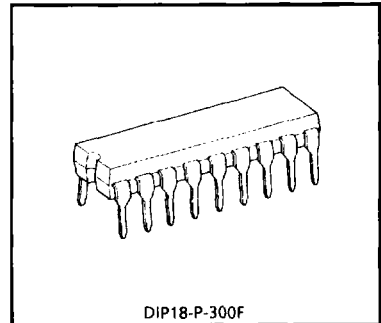
The TD62783APA is comprised of eight source current transistor array.

These drivers are specifically designed for fluorescent display applications.

Applications include relay, hammer and lamp drivers.

FEATURES

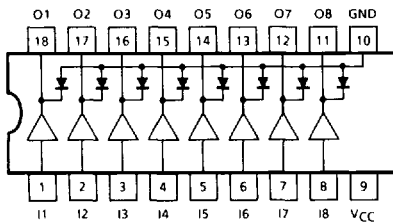
- High output voltage type-APA : $V_{CE(SUS)} = 50V$ (Min.)
- Output current (single output) : $I_{OUT} = -500mA/ch$ (Max.)
- Output clamp diodes
- Single supply voltage
- Input compatible with TTL, 5V CMOS
- Package type-APA : DIP-18 pin



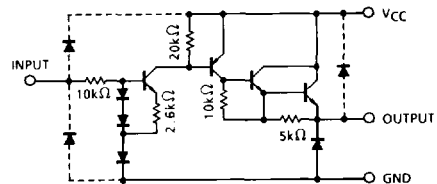
Weight : 1.478g (Typ.)

TYPE	DESIGNATION
TD62783APA	TTL, 5V CMOS

PIN CONNECTION (TOP VIEW)



SCHEMATICS (EACH DRIVER)



(Note) The input and output parasitic diodes cannot be used as clamp diodes.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	50	V
Output Current	I _{OUT}	- 500	mA / ch
Input Voltage	V _{IN}	15	V
Clamp Diode Reverse Voltage	V _R	50	V
Clamp Diode Forward Current	I _F	500	mA
Power Dissipation	P _D (Note)	1.47	W
Operating Temperature	T _{opr}	- 40~85	°C
Storage Temperature	T _{stg}	- 55~150	°C

(Note) Delated above 25°C in the proportion of 11.7mW/°C.

RECOMMENDED OPERATING CONDITIONS (Ta = - 40~85°C)

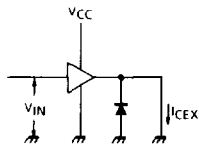
CHARACTERISTIC		SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage		V _{CC}	—	—	—	50	V
Output Current		I _{OUT}	T _{pw} = 25ms, Duty = 8% 8 Circuits	—	—	- 400	mA / ch
			T _{pw} = 25ms, Duty = 25% 8 Circuits	—	—	- 200	
Input Voltage		V _{IN}	—	—	—	12	V
Input Voltage	Output On	V _{IN} (ON)	—	2.0	5.0	15	V
	Output Off	V _{IN} (OFF)	—	0	—	0.8	V
Clamp Diode Reverse Voltage		V _R	—	—	—	50	V
Clamp Diode Forward Current		I _F	—	—	—	400	mA
Power Dissipation		P _D	—	—	—	0.52	W

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

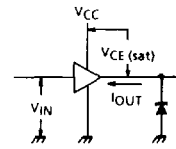
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Leakage Current	I_{CEX}	1	$V_{CC} = V_{CC \text{ MAX.}}, V_{IN} = 0.4V$ $T_a = 25^\circ C$	—	—	100	μA
Output Saturation Voltage	$V_{CE(sat)}$	2	$V_{IN} = V_{IN(ON)}, I_{OUT} = -350mA$	—	—	2.0	V
			$V_{IN} = V_{IN(ON)}, I_{OUT} = -225mA$	—	—	1.9	
			$V_{IN} = V_{IN(ON)}, I_{OUT} = -100mA$	—	—	1.8	
Input Current	$I_{IN(ON)}$	3	$V_{IN} = 2.4V$	—	36	52	μA
			$V_{IN} = 3.85V$	—	180	260	
Input Voltage	$V_{IN(ON)}$	4	$V_{CE} = 2.0V, I_{OUT} = -350mA$ $I_{OUT} = -500\mu A$	—	—	2.0	V
	$V_{IN(OFF)}$			0.8	—	—	
Supply Current	$I_{CC(ON)}$	3	$V_{IN} = V_{IN(ON)}, V_{CC} = 50V$	—	—	2.5	mA / ch
Clamp Diode Leakage Current	I_R	5	$V_R = 50V$	—	—	50	μA
Clamp Diode Forward Voltage	V_F	6	$I_F = 350mA$	—	—	2.0	V
Turn-On Delay	t_{ON}	7	$V_{CC} = V_{CC \text{ MAX.}}, R_L = 125\Omega$ $C_L = 15pF$	—	0.15	—	μs
Turn-Off Delay	t_{OFF}			—	1.8	—	

TEST CIRCUIT

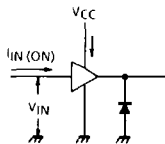
1. I_{CEX}



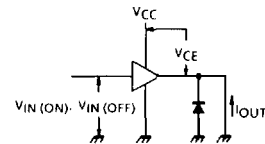
2. $V_{CE(sat)}$



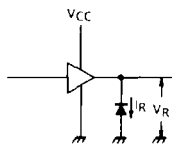
3. $I_{IN(ON)}$, I_{CC}



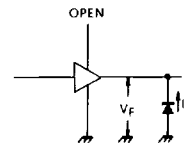
4. $V_{IN(ON)}$, $V_{IN(OFF)}$



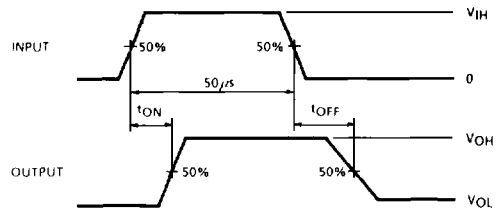
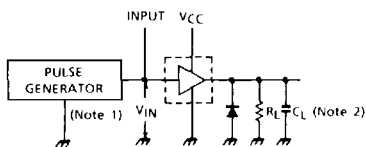
5. I_R



6. V_F



7. t_{ON} , t_{OFF}



(Note 1) Pulse Width $50\mu s$, Duty Cycle 10%
 Output Impedance 50Ω , $t_r \leq 5ns$, $t_f \leq 10ns$
 (Note 2) C_L includes probe and jig capacitance.

