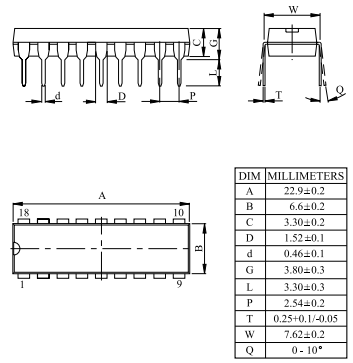
8CH HIGH-VOLTAGE SOURCE DRIVER

The KID65783AP/AF is comprised of eight source current transistor array. This driver is specifically designed for fluorescent display applications. Applications include relay, hammer and lamp drivers.

FEATURES

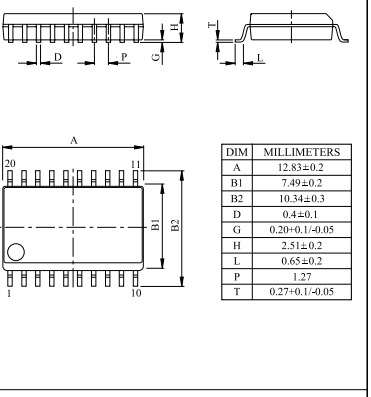
- High Output Voltage : V_{CC}=50V(Min.).
- Output Current (Single Output) I_{OUT} : -500mA(Min.).
- Output Clamp Diodes.
- Single Supply Voltage.
- Input Compatible With Various Types of Logic.
- Package Type-AP : DIP-18pin. DIP-18(1)Pin
- Package Type AF : FLP-20pin.

TYPE	DESIGNATION
KID65783AP/AF	TTL, 5V CMOS



DIM	MILLIMETERS
A	22.9±0.2
B	6.6±0.2
C	3.30±0.2
D	1.52±0.1
d	0.46±0.1
G	3.80±0.3
L	3.30±0.3
P	2.54±0.2
T	0.25+0.1/-0.05
W	7.62±0.2
Q	0 - 10°

DIP-18(1)



DIM	MILLIMETERS
A	12.83±0.2
B1	7.49±0.2
B2	10.34±0.3
D	0.4±0.1
G	0.20+0.1/-0.05
H	2.51±0.2
L	0.65±0.2
P	1.27
T	0.27+0.1/-0.05

FLP-20

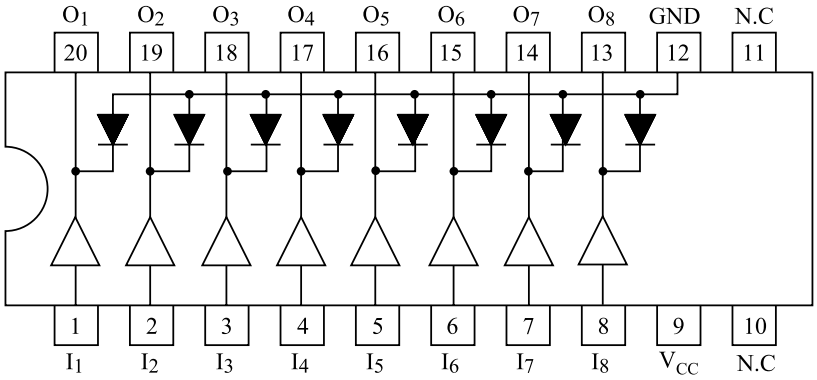
MAXIMUM RATINGS (Ta=25℃)

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	AP	P_D (Note)	1.47	W
	AF		0.96	
Operating Temperature		T_{opr}	-40 85	℃
Storage Temperature		T_{stg}	-55 150	℃

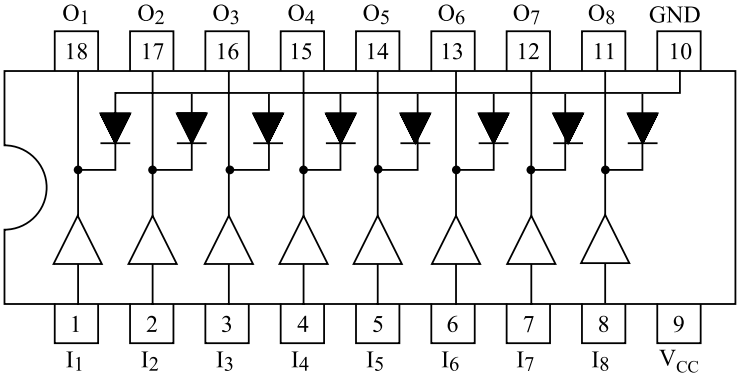
Note) Delated above 25℃ in the proportion of 11.7W/℃(AP Type), 7.7W/℃(AF Type).

PIN CONNECION (TOP VIEW)

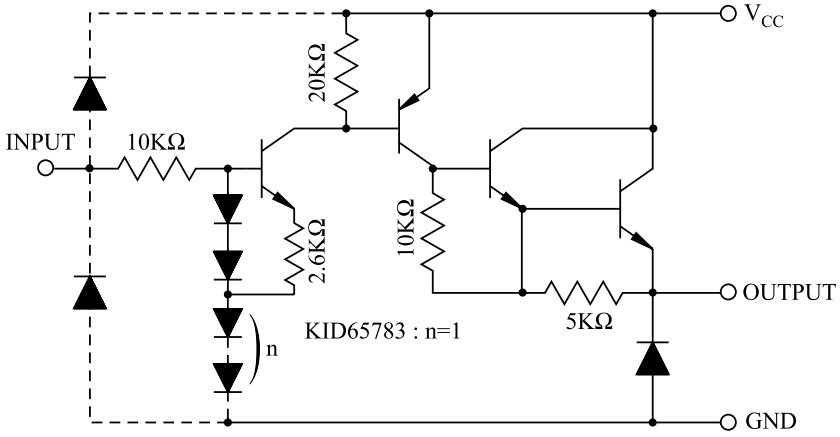
AF-TYPE (FLP-20 package)



AP-TYPE (DIP-18 package)



SCHEMATICS (EACH DRIVER)



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

RECOMMENDED OPERATING CONDITIONS (Ta=-40 85℃)

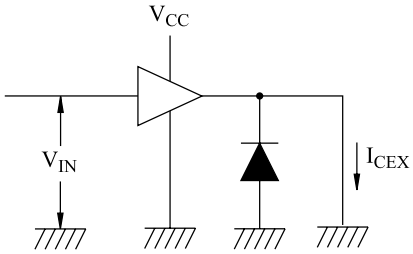
CHARACTERISTIC		SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Supply Voltage		V_{CC}	-		-	-	50	V
Output Current	AP	I_{OUT}	Ta=85℃ Tj=120℃ Tpw=25mS	Duty=10% 8 Circuits	-	-	-260	mA/ch
				Duty=50% 8 Circuits	-	-	-59	
	AF			Duty=10% 8 Circuits	-	-	-180	
				Duty=50% 8 Circuits	-	-	-38	
Input Voltage		V_{IN}	-		-	-	12	V
Input Voltage	Output ON	$V_{IN\ (ON)}$	-		2.0	5.0	15	V
	Output OFF	$V_{IN\ (OFF)}$	-		0	-	0.8	
Clamp Diode Reverse Voltage	AP	V_R	-		-	-	50	V
	AF				-	-	35	
Clamp Diode Forward Current		I_F	-		-	-	400	mA
Power Dissipation	AP	P_D	-		-	-	0.52	W
	AF				-	-	0.35	

ELECTRICAL CHARACTERISTICS (Ta=25℃)

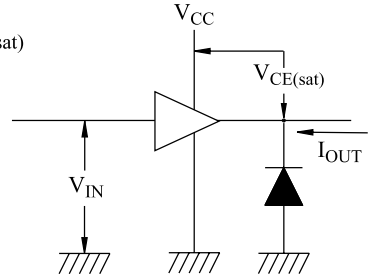
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Leakage Curret	I_{CEX}	1	$V_{CC}=V_{CC\ MAX}$, V_{IN}=0.4V Ta=25℃	-	-	100	μA
Output Saturation Voltage	$V_{CE(sat)}$	2	$V_{IN}=V_{IN(ON)}$, I_{OUT}=-350mA	-	-	2.0	V
			$V_{IN}=V_{IN(ON)}$, I_{OUT}=-225mA	-	-	1.9	
			$V_{IN}=V_{IN(ON)}$, 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	-	-	2.0	V
	$V_{IN(OFF)}$		I_{OUT}=-500 μA	0.8	-	-	
Supply Current	$I_{CC(ON)}$	3	$V_{IN}=V_{IN(ON)}$, V_{CC}=50V	-	-	2.5	mA/ch
Clamp Diode Reverse 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	$V_{CC}=V_{CC\ MAX}$, R_L=125Ω C_L=15pF	-	0.15	-	μs
Turn-Off Delay	t_{OFF}			-	1.8	-	

TEST CIRCUIT

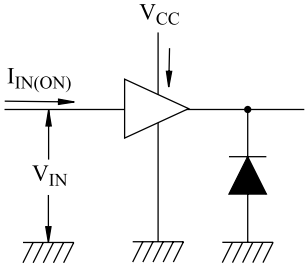
1. I_{CEX}



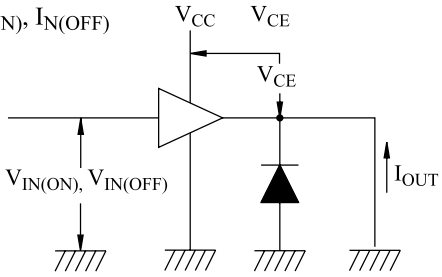
2. $V_{CE(sat)}$



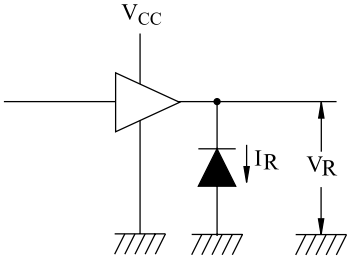
3. $I_{IN(ON)}$, I_{CC}



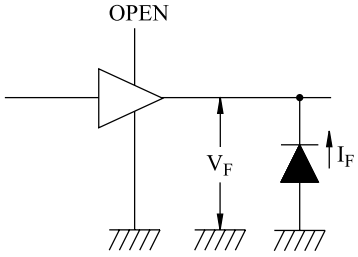
4. $V_{IN(ON)}$, $I_{N(OFF)}$



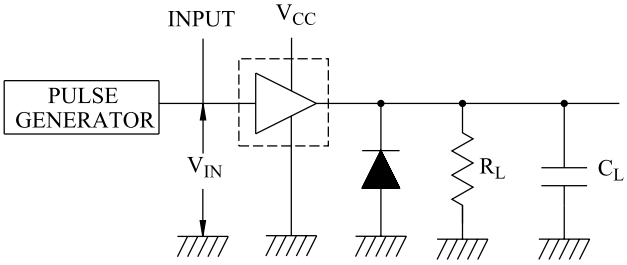
5. I_R

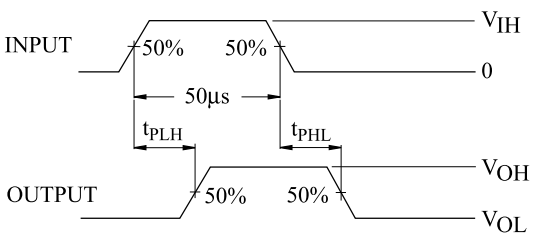


6. V_F



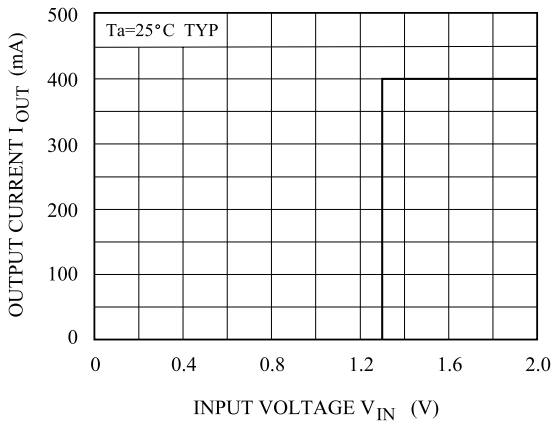
7. t_{ON} , t_{OFF}



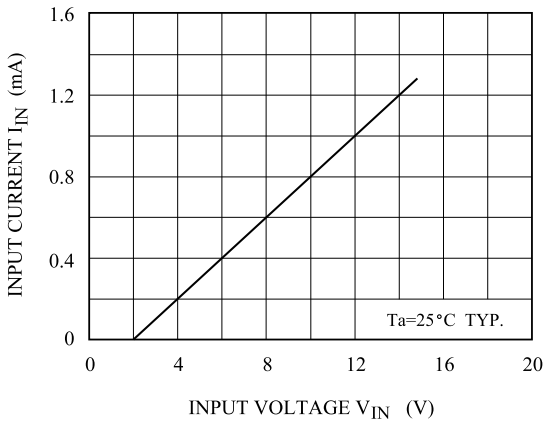


(Note 1) Pulse width 50µS, duty cycle 10%
Output impedance 50Ω , t ≦ 5ns, t ≦ 10ns
(Note 2) C_L includes probe and jig capacitance

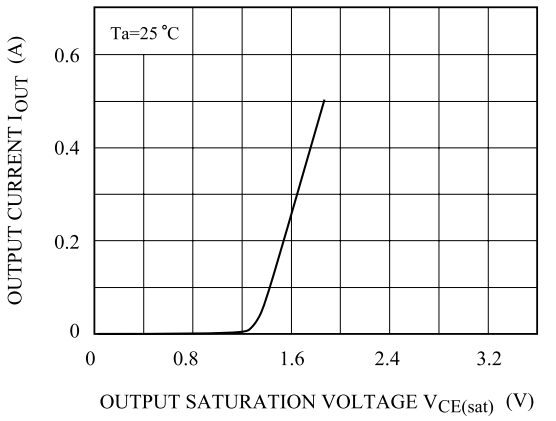
I_{OUT} - V_{IN}



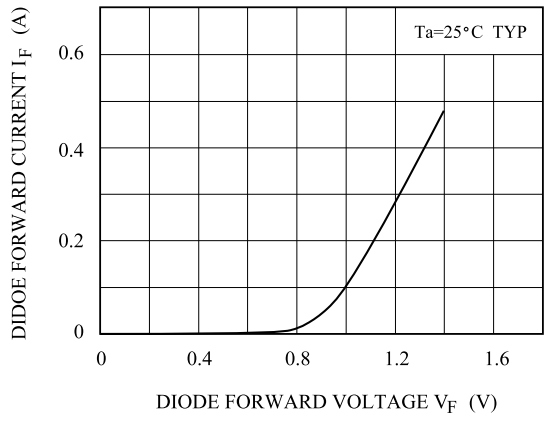
I_{IN} - V_{IN}



I_{OUT} - $V_{CE(sat)}$



I_F - V_F



P_D - Ta