

8CH HIGH-VOLTAGE SOURCE DRIVER

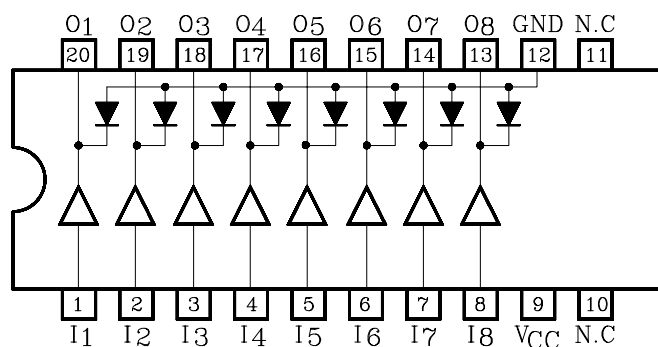
The KID65783AP/AF is comprised of eight source current transistor array.
This driver is specifically designed for fluorescent display applications.
Applications include relay, hammer and lamp drivers.

FEATURES

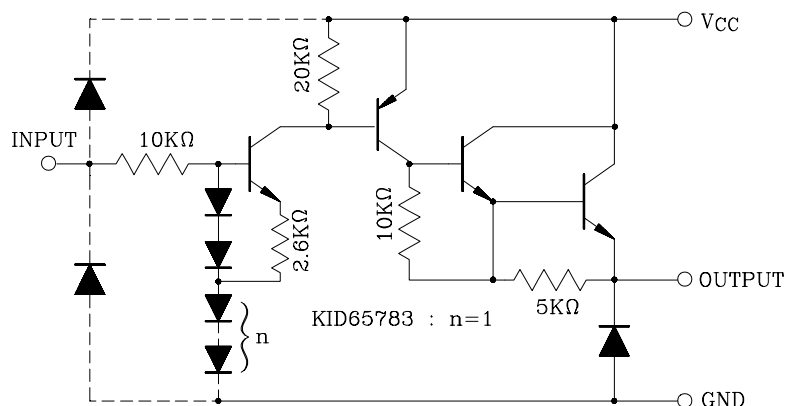
- High Output Voltage : $V_{CC}=50V(\text{Min.})$.
- Output Current (Single Output) $I_{OUT} : -500mA(\text{Min.})$.
- Output Clamp Diodes.
- Single Supply Voltage.
- Input Compatible With Various Types of Logic.
- Package Type-AP : DIP-18pin.
- Package Type AF : FLP-20pin.

TYPE	DESIGNATION
KID65783AP/AF	TTL, 5V CMOS

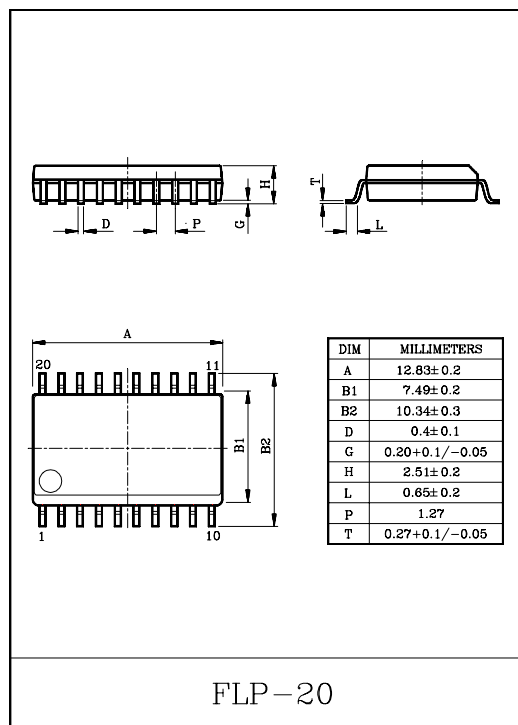
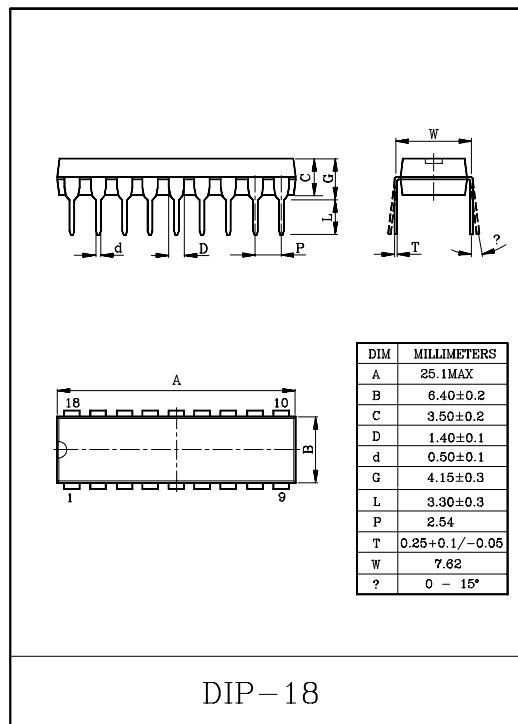
PIN CONNECTION (TOP VIEW)



SCHEMATICS (EACH DRIVER)



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



KID65783AP/AF

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).

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℃ Tp _w =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	

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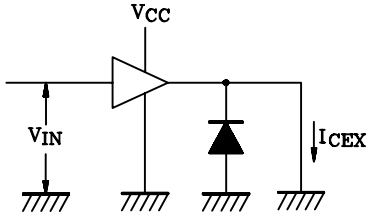
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Leakage Curret	I_{CEX}	1	$V_{CC}=V_{CC\ MAX.}$ $V_{IN}=0.4V$ $T_a=25^{\circ}C$	–	–	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	$V_{CE}=2.0V$, $I_{OUT}=-350mA$	–	–	2.0	V
	$V_{IN(OFF)}$		$I_{OUT}=-500\mu A$	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	$V_{CC}=V_{CC\ MAX.}$ $R_L=125\Omega$ $C_L=15pF$	–	0.15	–	μS
Turn-Off Delay	t_{OFF}			–	1.8	–	

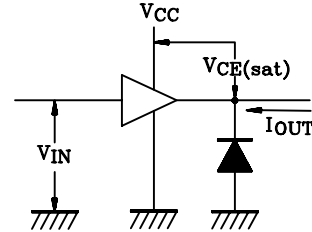
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TEST CIRCUIT

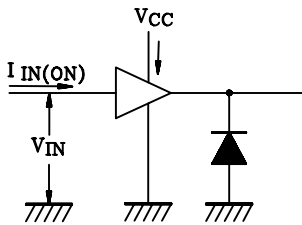
1. I_{CEX}



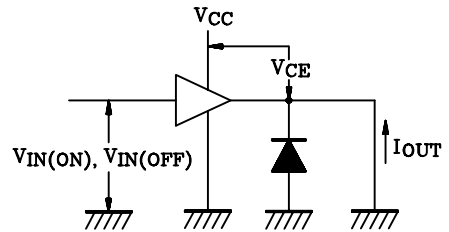
2. $V_{CE(sat)}$



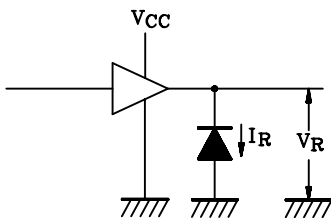
3. $I_{IN(ON)}$, I_{CC}



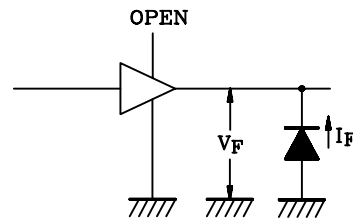
4. $V_{IN(ON)}$, $V_{IN(OFF)}$



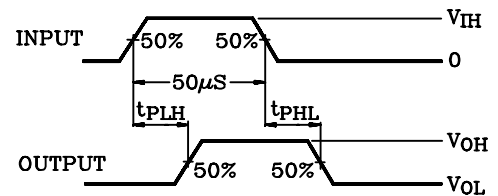
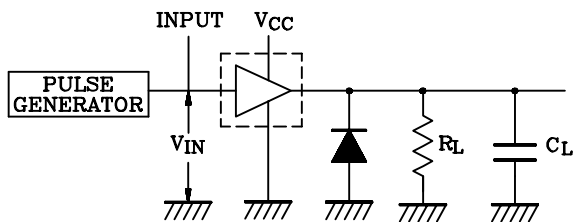
5. I_R



6. V_F



7. t_{ON} , t_{OFF}



(Note 1) Pulse width 50μs, duty cycle 10%
Output impedance 50Ω, $t_r \leq 5ns$, $t_f \leq 10ns$
(Note 2) C_L includes probe and jig capacitance

