

4 CIRCUIT TRANSISTOR ARRAY

SINGLE DRIVER

KID65551S COMMON EMITTER.

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FEATURES

- Output Current : 150mA Max.
 - High Voltage Outputs : 25V
 - Input Compatible With Various Types of Logic
- KID65551S Using External Resistor : General Purpose
 KID65553S $R_{IN}=2.7k\Omega$: TTL, 5V C-MOS
 KID65554S $R_{IN}=10.5k\Omega$: 6~15V P-MOS, C-MOS
 KID65555S $R_{IN}=20k\Omega$: 14~20V P-MOS

DESCRIPTION :

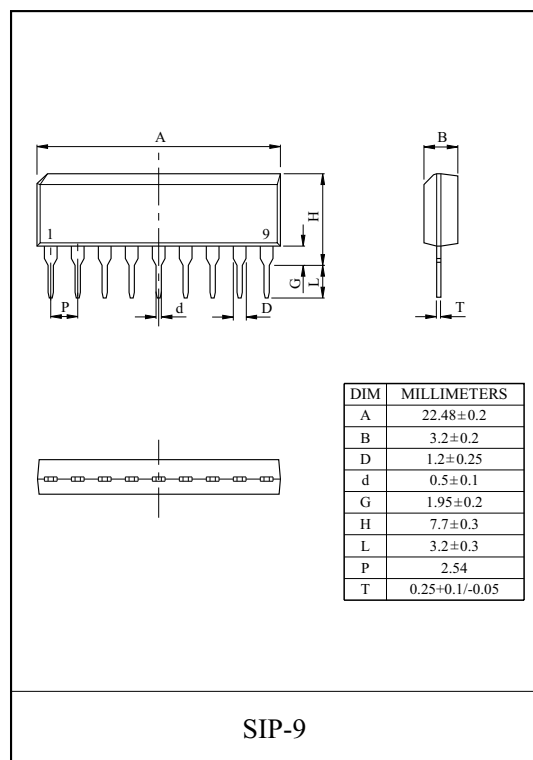
The KID65551S Series are comprised of four NPN transistor Arrays.
 These devices are specifically designed for LED and lamp drive.

MAXIMUM RATINGS (Ta=25 °C, unless otherwise noted)

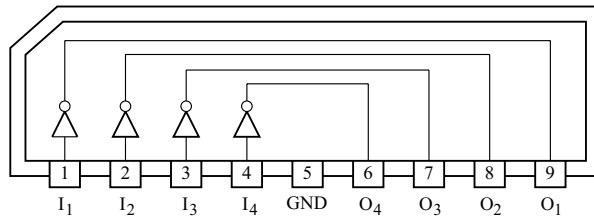
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CEO}	25	V
Collector-Base Voltage	V_{CBO}	35	V
Collector Current	I_C	150	mA
Input Voltage	V_{IN}^*	20	V
Input Current	I_{IN}^{**}	10	mA
GND Terminal Voltage	I_{GND}	400	mA
Power Dissipation	P_D	0.75	W
Operating Temperature	T_{opr}	-30 ~ 75	°C
Storage Temperature	T_{stg}	-55 ~ 150	°C

* Except KID65551S

** Only KID65551S

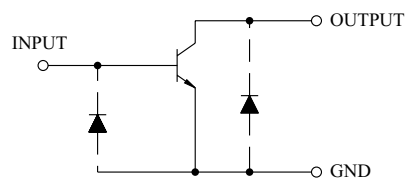


PIN CONNECTION



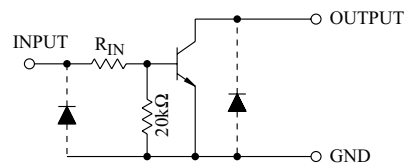
SCHEMATICS (EACH DRIVER)

KID65551S



KID65553S
KID65555S

KID65554S



KID65553S
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KID65555S

$R_{IN} = 2.7k\Omega$
 $R_{IN} = 10.5k\Omega$
 $R_{IN} = 20k\Omega$

KID65551S~KID65555S

RECOMMENDED OPERATING CONDITIONS (Ta=-30 ~ 75 °C)

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Voltage	V_{CEO}		0	-	25	V
Collector-Base Voltage	V_{CBO}		0	-	35	V
Collector Current	I_C	KID65551S, KID65553S	0	-	100	mA
		KID65554S	0	-	80	
		KID65555S	0	-	60	
Input Voltage	V_{IN}	KID65553S	0	-	20	V
		KID65554S				
		KID65555S				
Input Current	I_{IN}	KID65551S	0	-	5	mA
Power Dissipation	P_D		0	-	0.33	W

ELECTRICAL CHARACTERISTICS (Ta=25 °C, unless otherwise noted)

CHARACTERISTICS	SYMBOL	TEST CIRCUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Leak Current	I _{CEX}	1	V _{CE} =25V, V _{IN} =0		-	-	10	μA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	2	I _{IN} =0.5mA, I _C =10mA		-	0.15	0.2	V
			I _{IN} =2.5mA, I _C =50mA		-	0.35	0.5	
DC Forward Current Transfer Ratio	h _{FE}	2	V _{CE} =5V, I _C =10mA	*	60	-	-	
				**	50	-	-	
Input Voltage (Output ON)	V _{IN(ON)}	3	I _{IN} =0.5mA I _C =10mA	KID65553S	1.7	2.1	2.5	V
				KID65554S	4.4	6.0	7.6	
				KID65555S	7.7	10.7	13.8	
Turn-ON Delay	t _{ON}	4	V _{OUT} =25V, R _L =500Ω C _L =15pF		-	100	-	ns
Turn-OFF Delay	t _{OFF}				-	500	-	

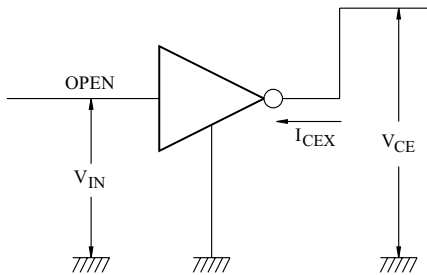
* Only KID65551S

** Except KID65551S

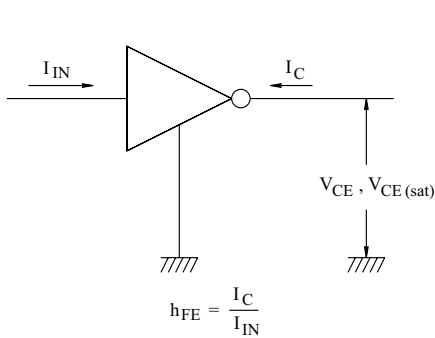
KID65551S~KID6555S

TEST CIRCUIT

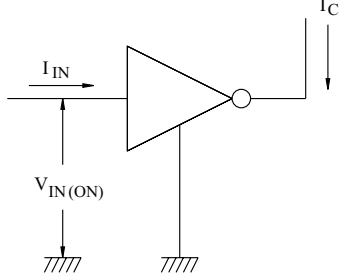
1. I_{CEX}



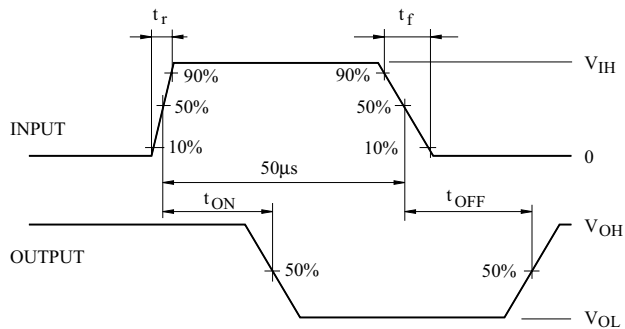
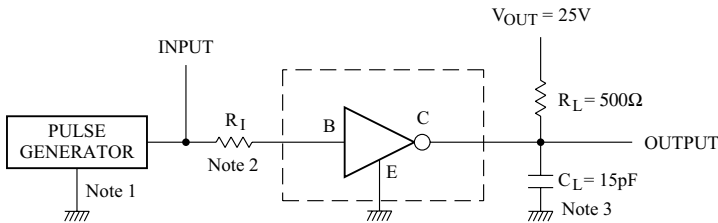
2. h_{FE} , $V_{CE(sat)}$



3. $V_{IN(ON)}$



4. t_{ON} , t_{OFF}



Notes : 1. Pulse Width 50µs, Duty Cycle 10%
Output Impedance 50Ω, $t_r \leq 5ns$, $t_f \leq 10ns$

2. See below

Input Conditions

Type Number	R_I	V_{IH}
KID65551S	2.7kΩ	3V
KID65553S	0	3V
KID65554S	0	10V
KID65555S	0	14V

3. C_L includes probe and jig capacitance.