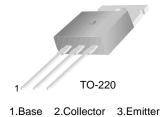


### KSD5018

### **Built-in Resistor at B-E for Motor Drive**

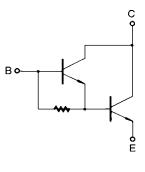
• High Voltage Power Darlington TR



## **NPN Silicon Darlington Transistor**

### Absolute Maximum Ratings T<sub>C</sub>=25°C unless otherwise noted

Sym- bol	Parameter	Value	Units
V <sub>CBO</sub>	Collector- Base Voltage	600	V
V <sub>CEO</sub>	Collector- Emitter Voltage	275	V
V <sub>EBO</sub>	Emitter Base Voltage	10	V
I <sub>C</sub>	Collector Current (DC)	4	Α
I <sub>CP</sub>	*Collector Current (Pulse)	6	Α
I <sub>B</sub>	Base Current	0.5	Α
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	40	W
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	- 55 ~ 150	°C



### Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V <sub>CEO</sub> (sus)	Collector-Emitter Sustaining Voltage	$I_C = 1.5A$ , $I_B = 0.05A$ , $L = 25mH$	275		V
BV <sub>CER</sub>	Collector-Emitter Breakdown Voltage	$I_C = 1 \text{mA}, R_{BE} = 330 \Omega$	600		V
I <sub>CES</sub>	Collector Cut-off Current	V <sub>CE</sub> = 500V		1	mA
I <sub>EBO</sub>	Emitter Cut-off Current	V <sub>EB</sub> = 10V, I <sub>C</sub> = 0		1	mA
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	$I_C = 2A, I_B = 5mA$		1.5	V
		$I_C = 3A, I_B = 20mA$		1.5	V
V <sub>BE</sub> (sat)	Base-Emitter Saturation Voltage	$I_C = 2A, I_B = 5mA$		2	V

# **Typical Characteristics**

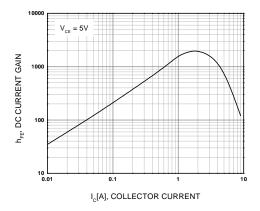


Figure 1. Static Characteristic

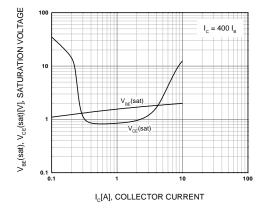


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

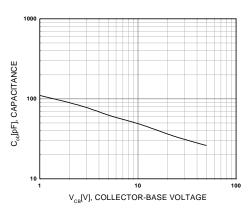


Figure 3. Collector Output Capacitance

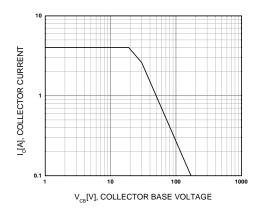


Figure 4. Safe Operating Area

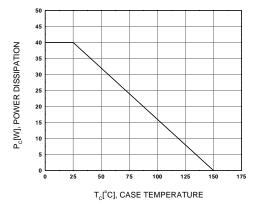
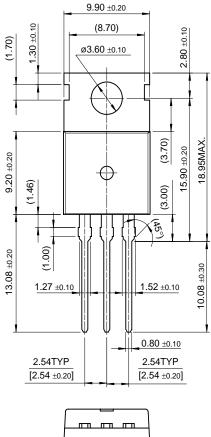


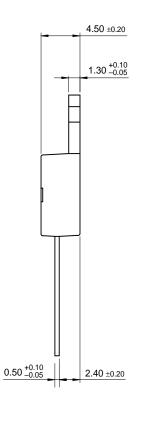
Figure 5. Power Derating

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# **Package Demensions**

## TO-220





10.00 ±0.20

Dimensions in Millimeters

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