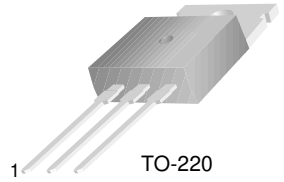
FAIRCHILD
SEMICONDUCTOR TM

KSD5018

Built-in Resistor at B-E for Motor Drive

- High Voltage Power Darlington TR



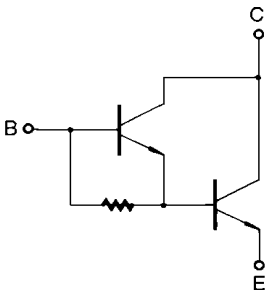
TO-220

1.Base 2.Collector 3.Emitter

NPN Silicon Darlington Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Sym-bol	Parameter	Value	Units
V_{CBO}	Collector- Base Voltage	600	V
V_{CEO}	Collector- Emitter Voltage	275	V
V_{EBO}	Emitter Base Voltage	10	V
I_C	Collector Current (DC)	4	A
I_{CP}	*Collector Current (Pulse)	6	A
I_B	Base Current	0.5	A
P_C	Collector Dissipation (T_C=25°C)	40	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C



Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V_{CEO}(sus)	Collector-Emitter Sustaining Voltage	I_C = 1.5A, I_B = 0.05A, L = 25mH	275		V
BV_{CER}	Collector-Emitter Breakdown Voltage	I_C = 1mA, R_{BE} = 330Ω	600		V
I_{CES}	Collector Cut-off Current	V_{CE} = 500V		1	mA
I_{EBO}	Emitter Cut-off Current	V_{EB}= 10V, I_C = 0		1	mA
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 2A, I_B = 5mA I_C = 3A, I_B = 20mA		1.5 1.5	V V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 2A, I_B = 5mA		2	V

Typical Characteristics

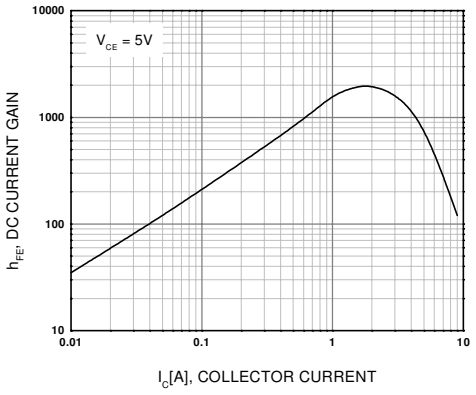


Figure 1. Static Characteristic

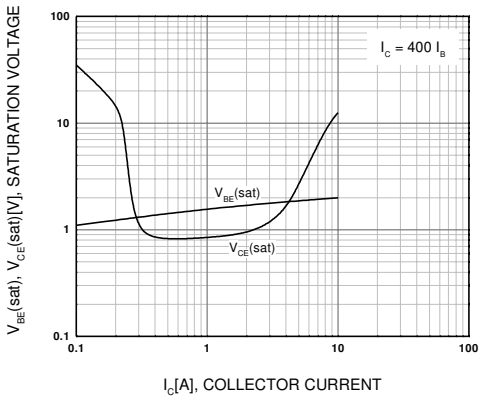


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

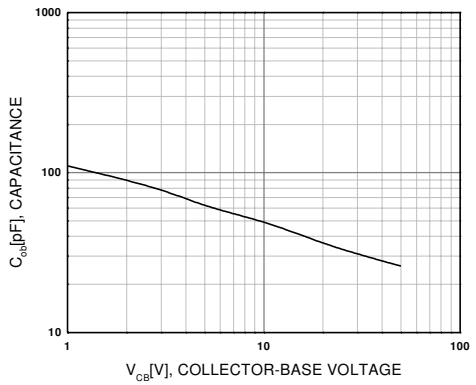


Figure 3. Collector Output Capacitance

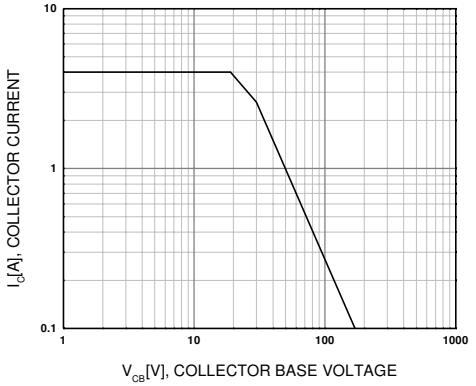


Figure 4. Safe Operating Area

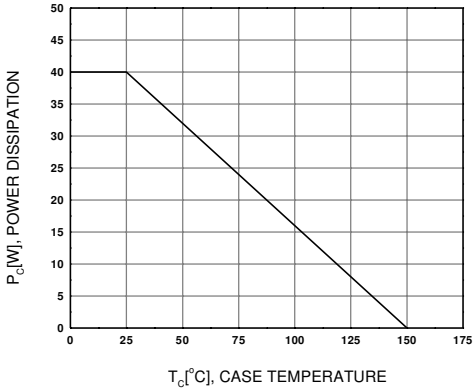
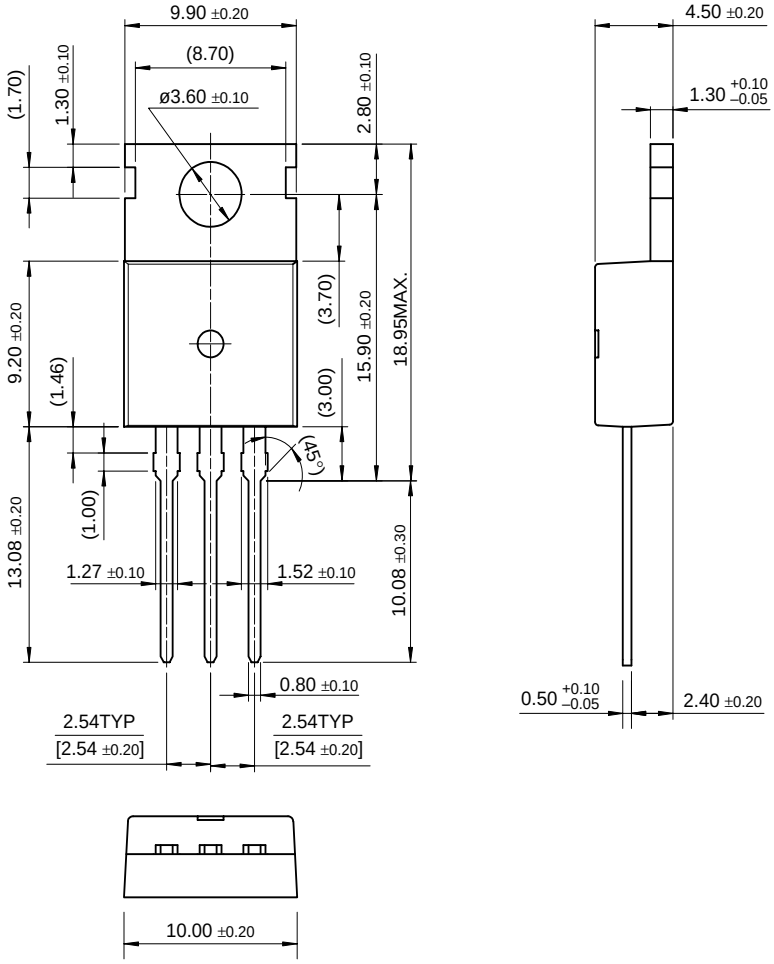


Figure 5. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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