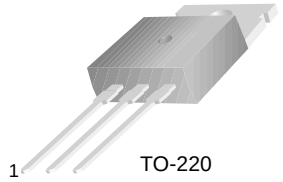
FAIRCHILD SEMICONDUCTOR™

KSE3055T

General Purpose and Switching Applications

- DC Current Gain Specified to I_C =10A
- High Current Gain-Bandwidth Product : f_T = 2MHz (Min.)



TO-220

1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector -Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	10	A
I_B	Base Current	6	A
P_C	Collector Dissipation (T_C=25°C)	75	W
	Collector Dissipation (T_a=25°C)	0.6	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
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 200mA, I_B = 0	60		V
I_{CEO}	Collector Cut-off Current	V_{CE} = 30V, I_B = 0		700	μA
I_{CEX1} I_{CEX2}	Collector Cut-off Current	V_{CE} = 70V, V_{BE}(off) = -1.5V V_{CE} = 70V, V_{BE}(off) = -1.5V @ T_C = 150°C		1 5	mA mA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0		5	mA
h_{FE}	*DC Current Gain	V_{CE} = 4V, I_C = 4A V_{CE} = 4V, I_C = 10A	20 5	100	
V_{CE}(sat)	*Collector-Emitter Saturation Voltage	I_C = 4A, I_B = 0.4A I_C = 10A, I_B = 3.3A		1.1 8	V V
V_{BE} (on)	*Base-Emitter On Voltage	V_{CE} = 4V, I_C = 4A		1.8	V
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 500mA	2		MHz

* Pulse test: PW≤300μs, duty cycle≤2% Pulse

Typical Characteristics

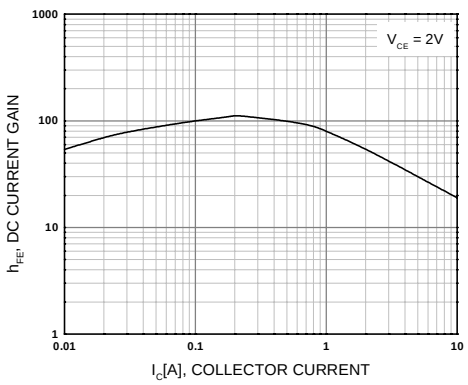


Figure 1. DC current Gain

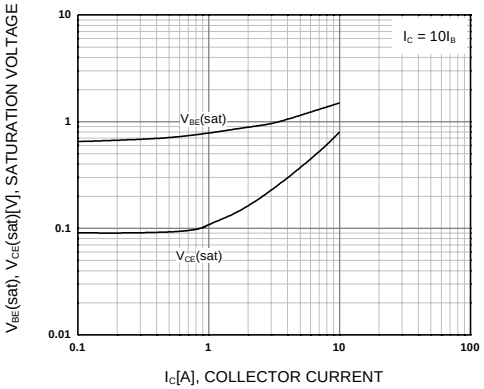


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

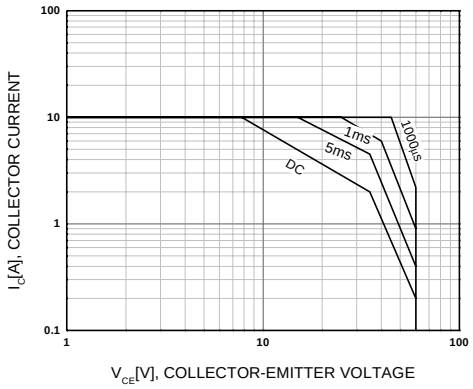


Figure 3. Safe Operating Area

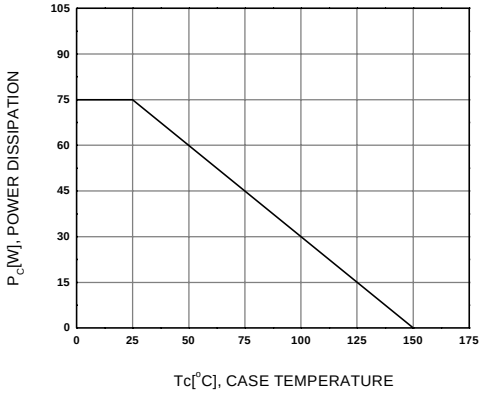


Figure 4. Power Derating

Package Demensions

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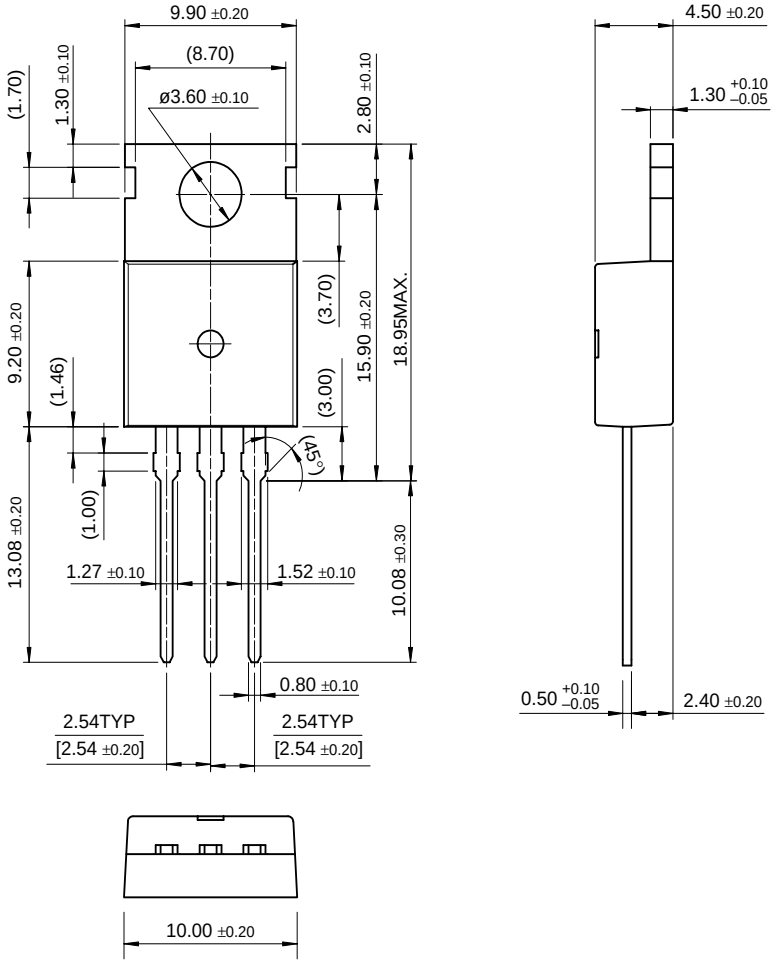

Dimensions in Millimeters

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