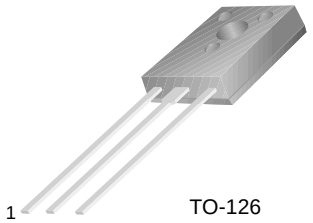
FAIRCHILD
SEMICONDUCTOR®

KSE200

Feature

- Low Collector-Emitter Saturation Voltage
- High Current Gain Bandwidth Product : f_T=65MHz @ I_C=100mA (Min.)
- Complement to KSE210



TO-126

1. Emitter 2.Collector 3.Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter- Base Voltage	8	V
I_C	Collector Current	5	A
P_C	Collector Dissipation (T_C=25°C)	15	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 65 ~ 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=10mA, I_B=0	25		V
I_{CBO}	Collector Cut-off Current	V_{CB}=40V, I_E=0 V_{CB}=40V, I_E=0 @ T_J=125°C		100 100	nA µA
I_{EBO}	Emitter Cut-off Current	V_{BE}=8V, I_C=0		100	nA
h_{FE}	DC Current Gain	V_{CE}=1V, I_C=500mA V_{CE}=1V, I_C=2A V_{CE}=2V, I_C=5A	70 45 10	 180 	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C=500mA, I_B=50mA I_C=2A, I_C=200mA I_C=5A, I_B=1A		0.3 0.75 1.8	V V V
V_{BE}(sat)	Base- Emitter Saturation Voltage	I_C=5A, I_B=1A		2.5	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE}=1V, I_C=2A		1.6	V
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=100mA	65		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=0.1MHz		80	pF

Typical Characteristics

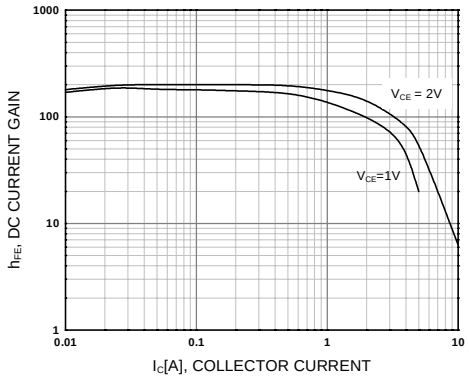


Figure 1. DC current Gain

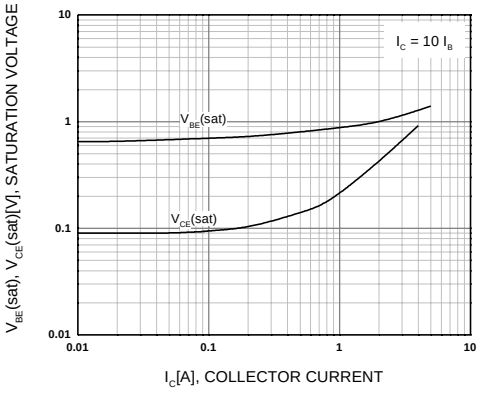


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

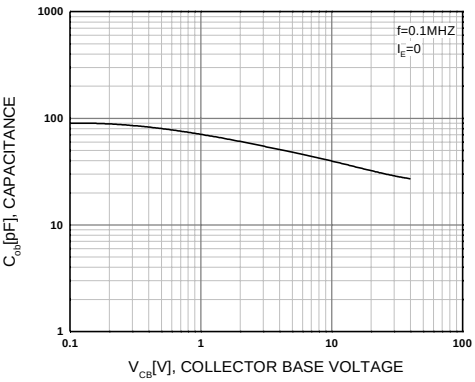


Figure 3. Collector Output Capacitance

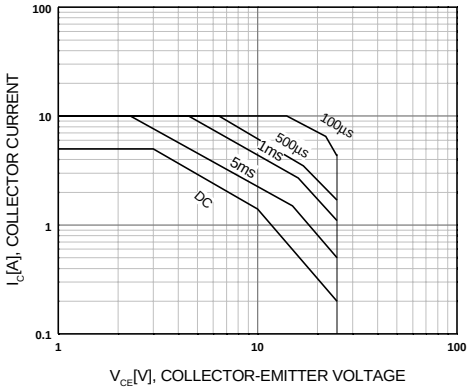


Figure 4. Forward Bias Safe Operating Area

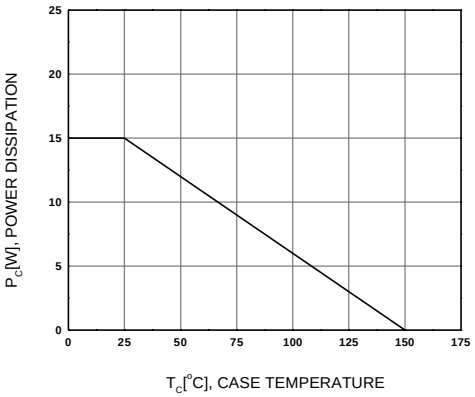


Figure 5. Power Derating

Package Demensions

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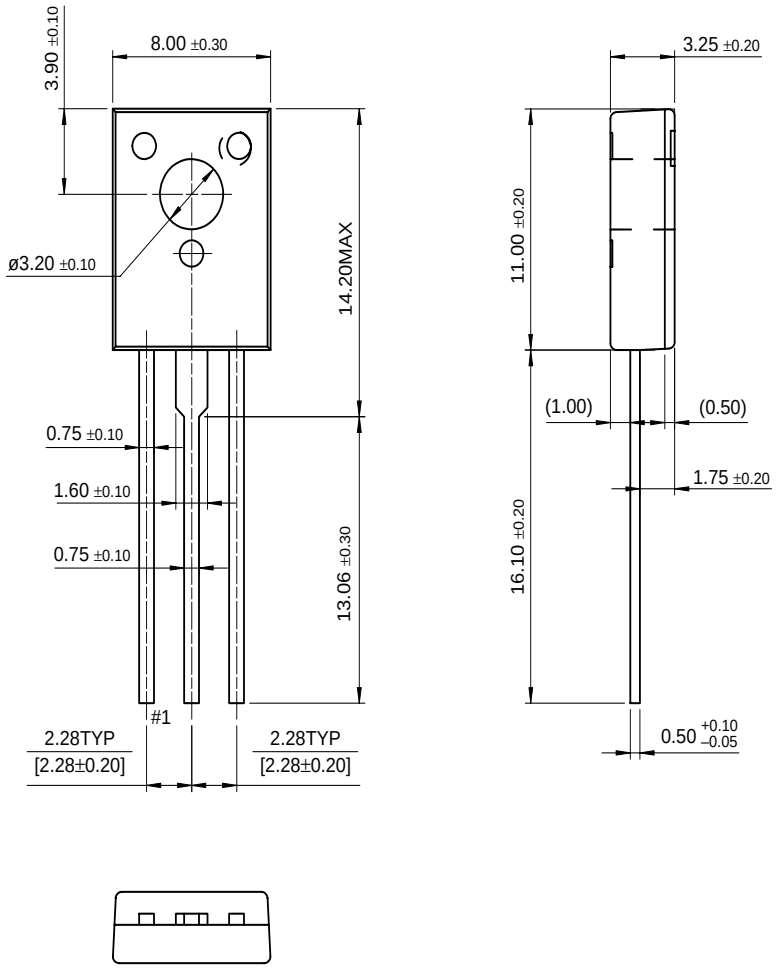

Dimensions in Millimeters

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