

KSE210

Feature

- Low Collector-Emitter Saturation Voltage
- High Current Gain Bandwidth Product : $f_T=65\text{MHz}@I_C=-100\text{mA}$ (Min.)
- Complement to KSE200



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ 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 ($T_C=25^\circ\text{C}$)	15	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 65 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = - 10\text{mA}, I_B = 0$	-25		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -40\text{V}, I_E = 0$ $V_{CB} = - 40\text{V}, I_E = 0 @ T_J = 125^\circ\text{C}$		-100 -100	nA μA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = - 8\text{V}, I_C = 0$		-100	nA
h_{FE1} h_{FE2} h_{FE3}	DC Current Gain	$V_{CE} = - 1\text{V}, I_C = - 500\text{mA}$ $V_{CE} = - 1\text{V}, I_C = - 2\text{A}$ $V_{CE} = - 2\text{V}, I_C = - 5\text{A}$	70 45 10	180	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = - 500\text{mA}, I_B = - 50\text{mA}$ $I_C = - 2\text{A}, I_B = - 200\text{mA}$ $I_C = - 5\text{A}, I_B = - 1\text{A}$		-0.3 -0.75 -1.8	V V V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = - 5\text{A}, I_B = - 1\text{A}$		-2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = - 1\text{V}, I_C = - 2\text{A}$		-1.6	V
f_T	Current Gain Bandwidth Product	$V_{CE} = - 10\text{V}, I_C = - 100\text{mA}$	65		MHz
C_{ob}	Output Capacitance	$V_{CB} = - 10\text{V}, I_E = 0, f = 1\text{MHz}$		120	pF

Typical Characteristics

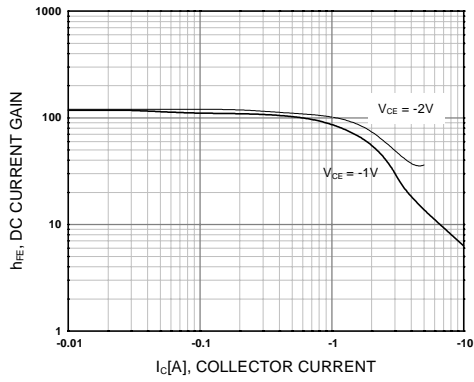


Figure 1. DC current Gain

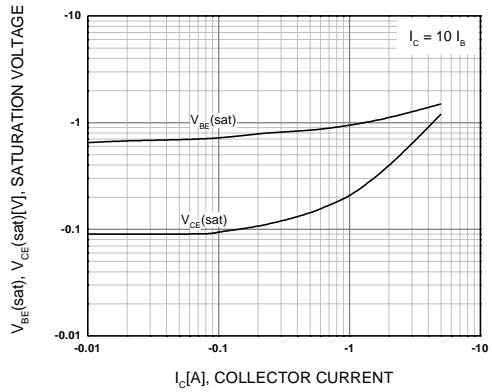


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

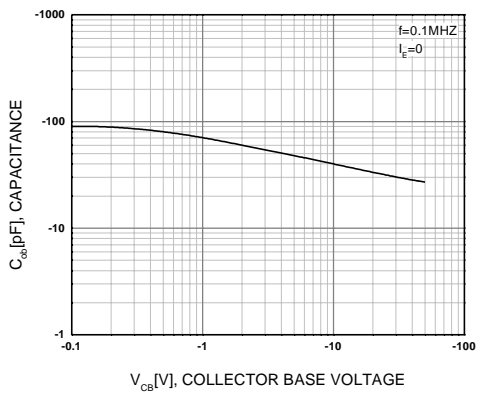


Figure 3. Collector Output Capacitance

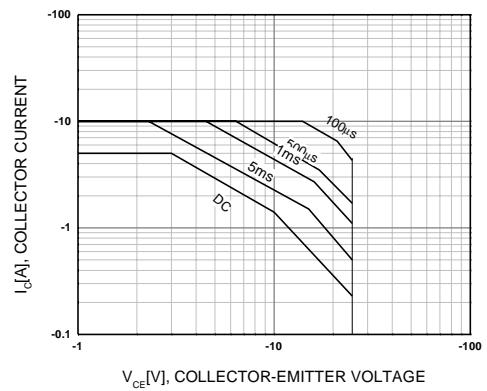


Figure 4. Safe Operating Area

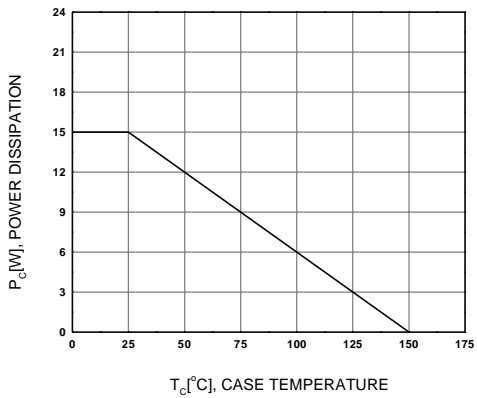


Figure 5. Power Derating

Package Dimensions

KSE210

TO-126



Dimensions in Millimeters

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