

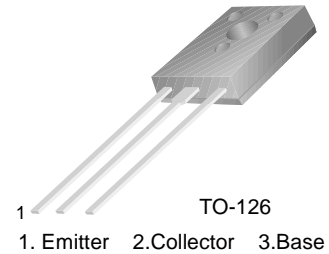


KSE210

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

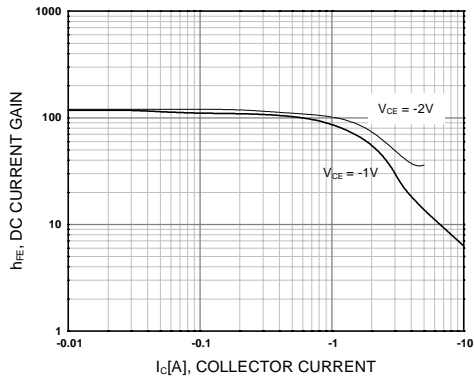


Figure 1. DC current Gain

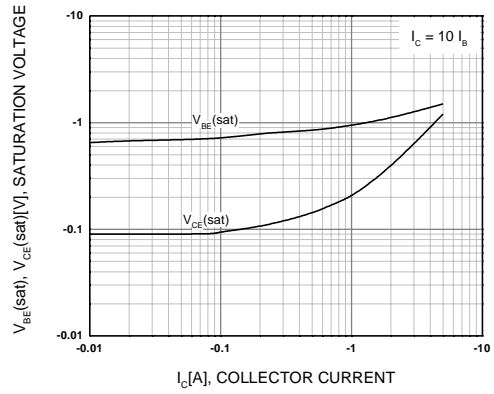


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

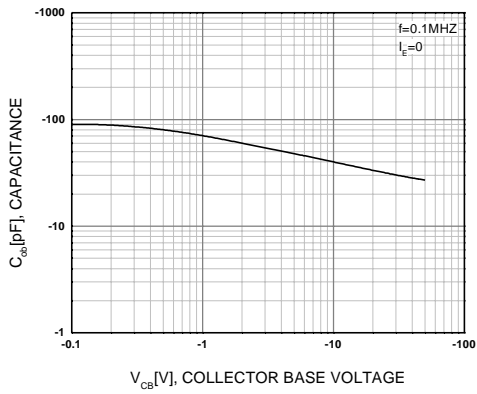


Figure 3. Collector Output Capacitance

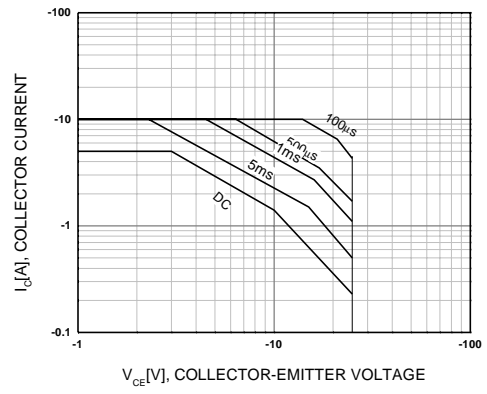


Figure 4. Safe Operating Area

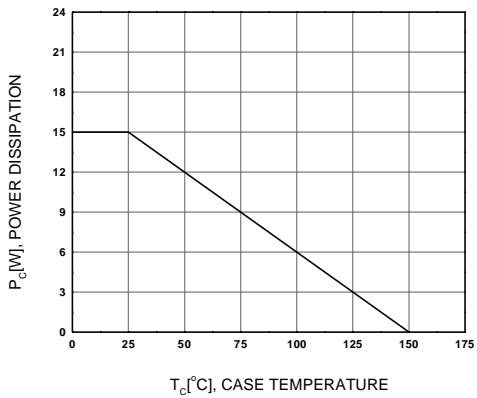
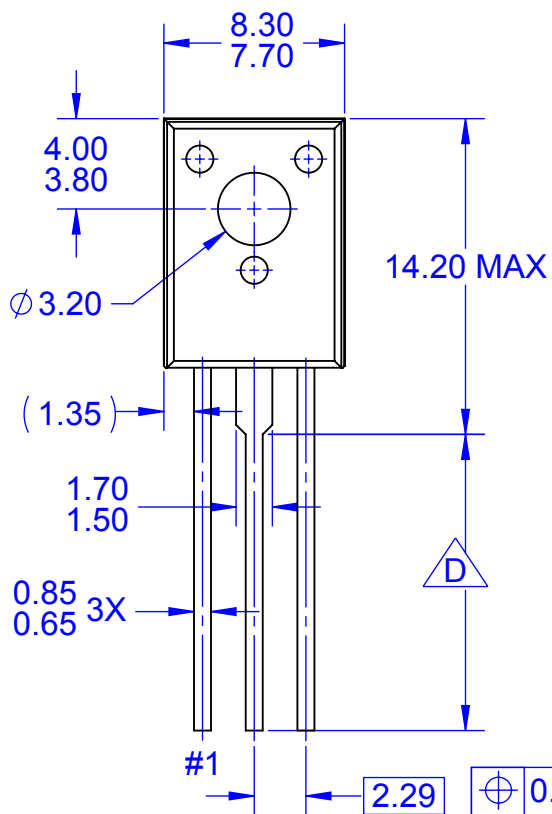
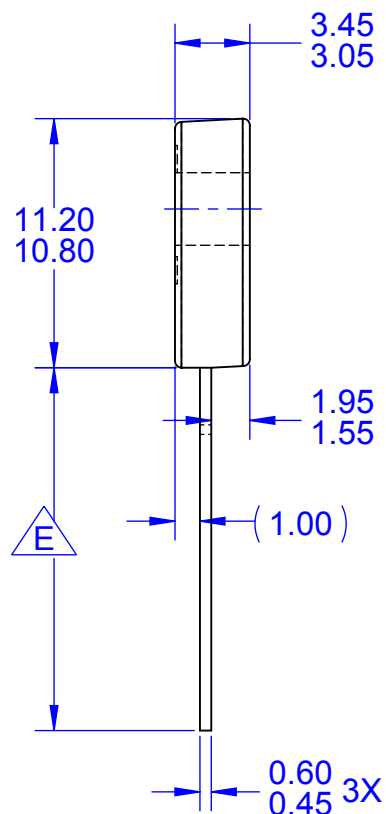


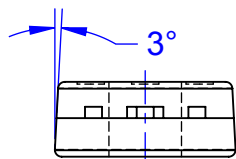
Figure 5. Power Derating



TOP VIEW



SIDE VIEW



FRONT VIEW

PRODUCTION CODE	TERMINAL LENGTH "D"	TERMINAL LENGTH "E"
TSSTU	3.45 - 4.05	6.45-7.45
TSTU	2.36 - 2.96	5.36-6.36
NONE (STD LENGTH)	12.76 - 13.36	15.76-16.76

NOTES:

- A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

$\triangle D$ FOR TERMINAL LENGTH "D", REFER TO TABLE

$\triangle E$ FOR TERMINAL LENGTH "E", REFER TO TABLE

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