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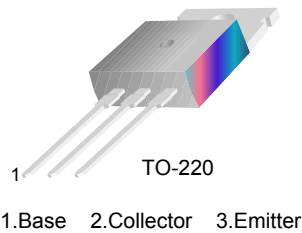
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KSD526

NPN Epitaxial Silicon Transistor

Power Amplifier Applications

- Complement to KSB596



Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	4	A
I_B	Base Current	0.4	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55~150	$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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

Symbol	Parameter	Test Condition	MIN	MAX	MAX	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = 80\text{V}, I_E = 0$			30	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			100	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 50\text{mA}, I_B = 0$	80			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\text{mA}, I_C = 0$	5			V
h_{FE}	DC Current Gain	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$ $V_{CE} = 5\text{V}, I_C = 3\text{A}$	40 15	50	240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 3\text{A}, I_B = 0.3\text{A}$		0.45	1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 5\text{V}, I_C = 3\text{A}$		1	1.5	V
f_T	Current Gain - Bandwidth Product	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	3	8		MHz
C_{cb}	Collector Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		90		pF

h_{FE} Classification

Classification	R	O	Y
h_{FE}	40~80	70~140	120~240

Typical Characteristics

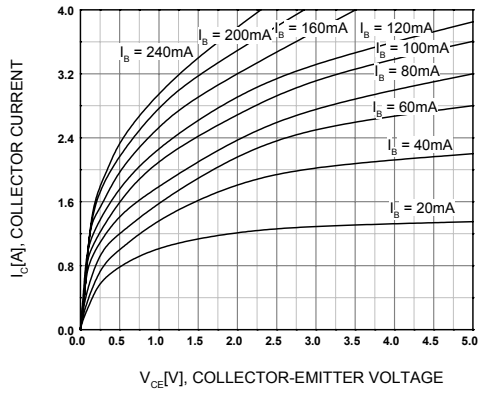


Figure 1. Static Characteristic

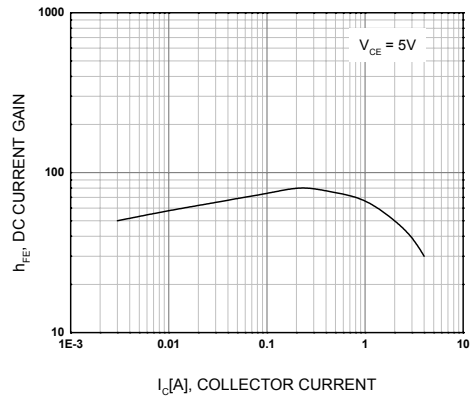


Figure 2. DC current Gain

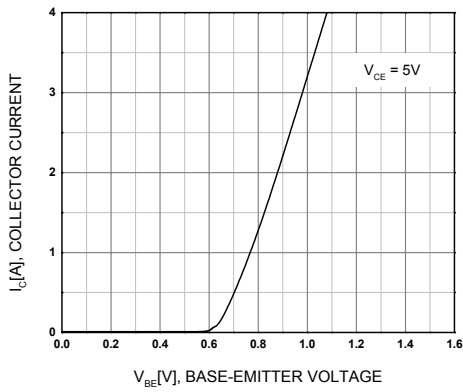


Figure 3. Base-Emitter On Voltage

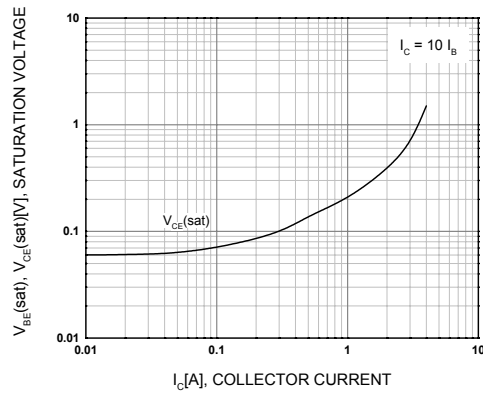


Figure 4. Collector-Emitter Saturation Voltage

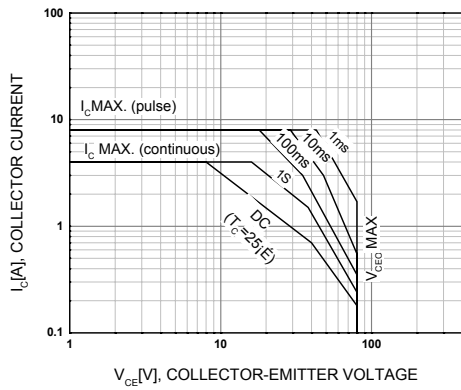


Figure 5. Safe Operating Area

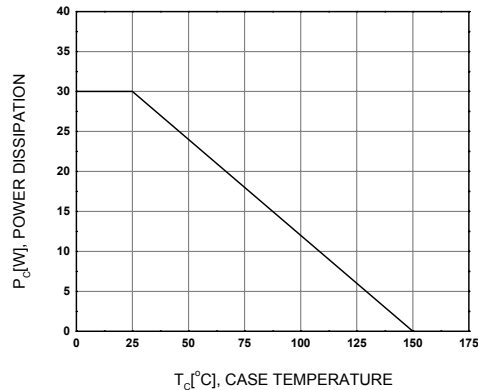


Figure 6. Power Derating

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