

KSD882

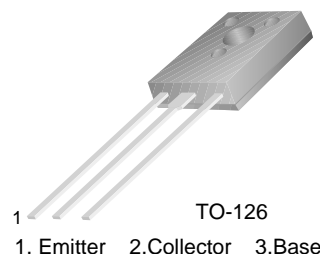
NPN Epitaxial Silicon Transistor

Recommended Applications

- Audio Frequency Power Amplifier

Features

- Low Speed Switching
- Complement to KSB772.



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

Symbol	Parameter	Ratings	Units
BV_{CBO}	Collector-Base Voltage	40	V
BV_{CEO}	Collector-Emitter Voltage	30	V
BV_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current(DC)	3	A
I_C	Collector Current(Pulse)**	7	A
I_B	Base Current	0.6	A
P_D	Total Device Dissipation($T_C=25^\circ\text{C}$)	10	W
	Total Device Dissipation($T_a=25^\circ\text{C}$)	1	W
T_J, T_{STG}	Junction and Storage Temperature	- 55 ~ +150	$^\circ\text{C}$

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

** $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=500\mu\text{A}, I_E=0$	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}, I_B=0$	30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=500\mu\text{A}, I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 30\text{V}, I_E = 0$			1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 3\text{V}, I_C = 0$			1	μA
h_{FE1} h_{FE2}	*DC Current Gain	$V_{CE} = 2\text{V}, I_C = 20\text{mA}$ $V_{CE} = 2\text{V}, I_C = 1\text{A}$	30 60	150 160	400	
$V_{CE(sat)}$	*Collector-Emitter Saturation Voltage	$I_C = 2\text{A}, I_B = 0.2\text{A}$		0.3	0.5	V
$V_{BE(sat)}$	*Base-Emitter Saturation Voltage	$I_C = 2\text{A}, I_B = 0.2\text{A}$		1.0	2.0	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 5\text{V}, I_E = 0.1\text{A}$		90		MHz
C_{ob}	Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0$ $f = 1\text{MHz}$		45		pF

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$ Pulsed

h_{FE} Classification

Classification	R	O	Y	G
h _{FE2}	60 ~ 120	100 ~ 200	160 ~ 320	200 ~ 400

Ordering Information

Part Number	Marking	Package	Packing Method	Remarks
KSD882OSTU	D882O	TO-126	TUBE	hFE1 R grade
KSD882RSTU	D882R	TO-126	TUBE	hFE1 O grade
KSD882YSTU	D882Y	TO-126	TUBE	hFE1 Y grade
KSD882GSTU	D882G	TO-126	TUBE	hFE1 G grade

- * 1. Affix "-S-" means the standard TO126 Package. If the affix is "-STS-" instead of "-S-", that means the short-lead TO126 package.
 2. Suffix "-TU" means the tube packing. The Suffix "TU" could be replaced to other suffix character as packing method.

Typical Characteristics

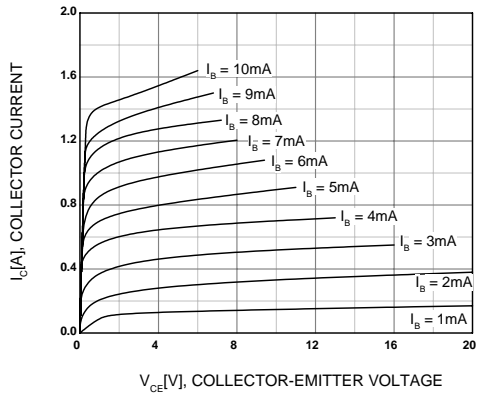


Figure 1. Static Characteristic

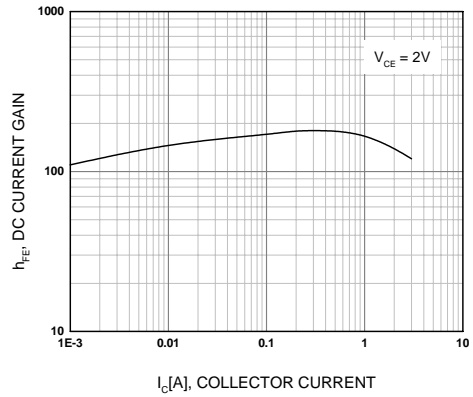


Figure 2. DC current Gain

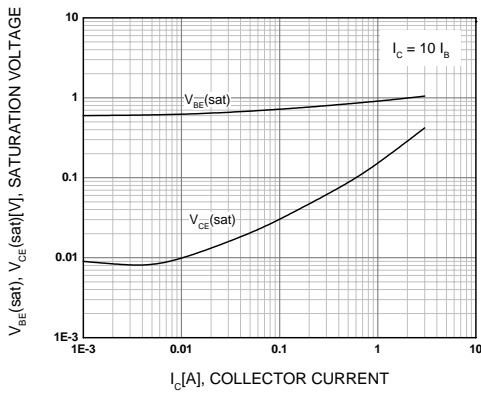


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

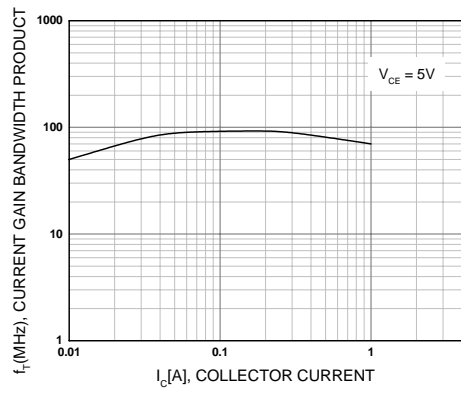


Figure 4. Current Gain Bandwidth Product

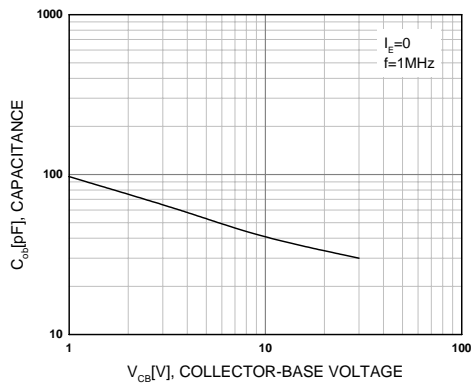


Figure 5. Collector Output Capacitance

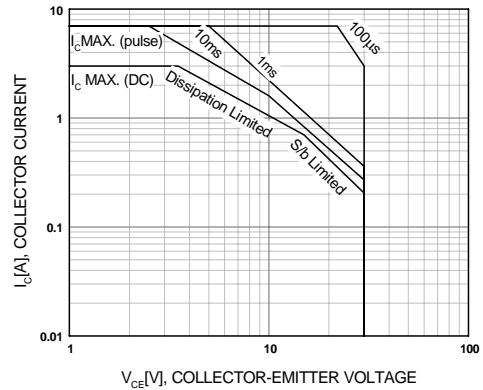


Figure 6. Safe Operating Area

Typical Characteristics

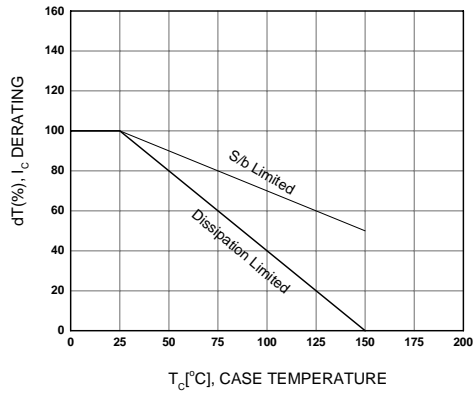


Figure 7. Derating Curve Of Safe Operating Areas

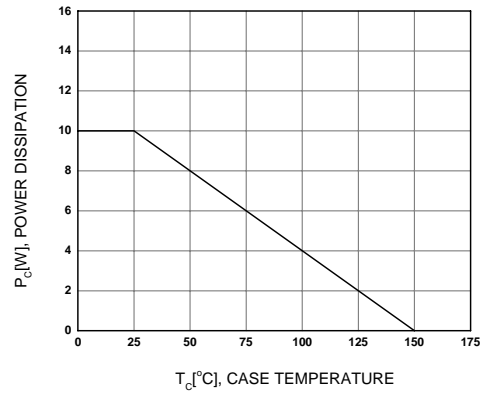



Figure 8. Power Derating



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Preliminary	First Production	This datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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Rev. I30



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