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KSD882

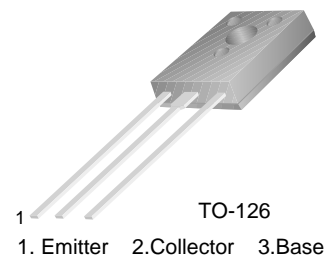
NPN Epitaxial Silicon Transistor

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($T_C=25^\circ\text{C}$) Total Device Dissipation($T_a=25^\circ\text{C}$)	10 1	W 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

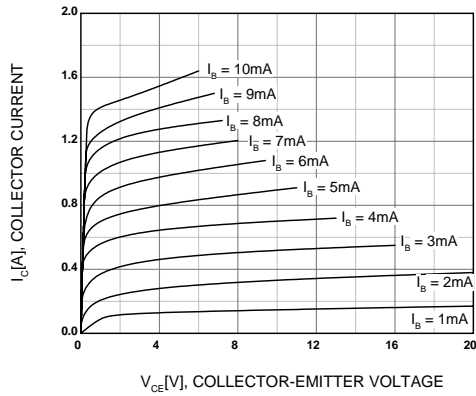


Figure 1. Static Characteristic

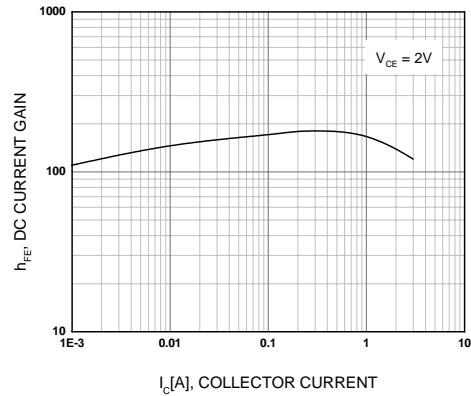
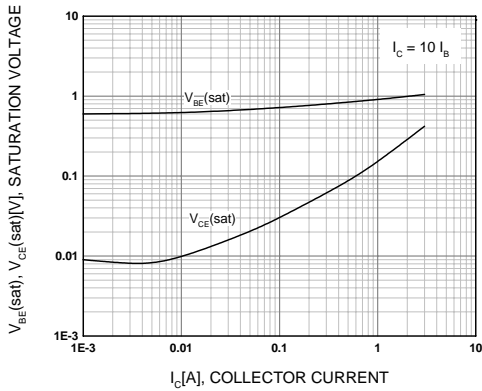


Figure 2. DC current Gain



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

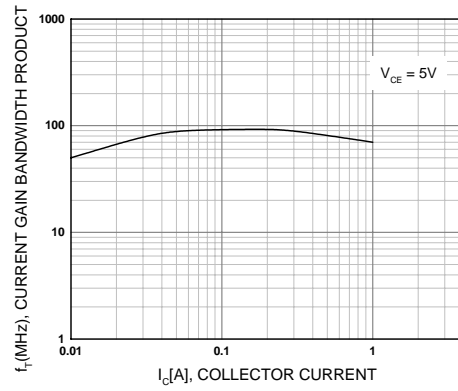


Figure 4. Current Gain Bandwidth Product

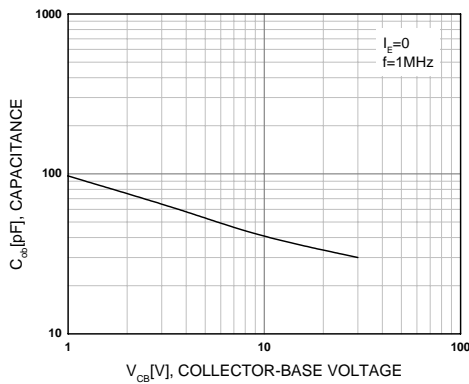


Figure 5. Collector Output Capacitance

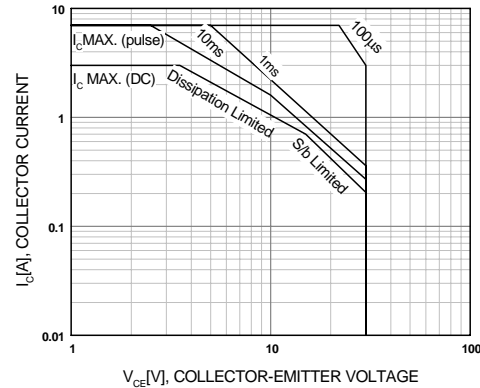


Figure 6. Safe Operating Area

Typical Characteristics

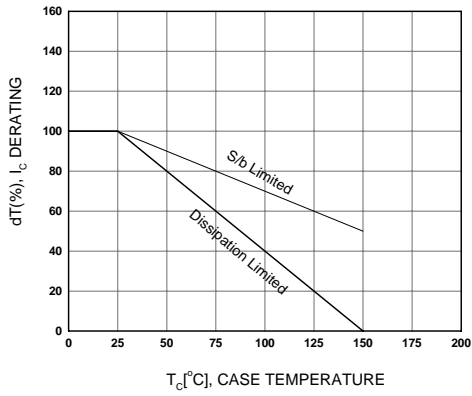


Figure 7. Derating Curve Of Safe Operating Areas

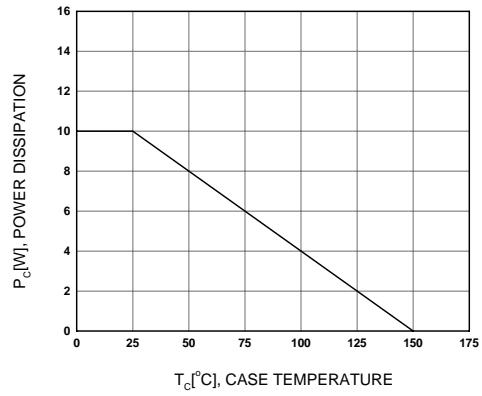


Figure 8. Power Derating



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