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KSD882 NPN Epitaxial Silicon Transistor

Recommended Applications

Audio Frequency Power Amplifier

Featuers

- Low Speed Switcing
- Complement to KSB772.



November 2007

Absolute Maximum Ratings* T_a = 25°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	А
I _C	Collector Current(Pulse)**	7	А
I _B	Base Current	0.6	А
P _D	Total Device Dissipation($T_C=25^{\circ}C$) Total Device Dissipation($T_a=25^{\circ}C$)	10 1	W W
T _J , T _{STG}	Junction and Storage Temperature	- 55 ~ +150	°C

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

** PW≤10ms, Duty Cycle≤50%

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

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	I _C =500uA, I _E =0	40			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =5mA, I _B =0	30			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E =500uA, I _C =0	5			V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 30V, I_E = 0$			1	μA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 3V, I_{C} = 0$			1	μA
h _{FE1} h _{FE2}	*DC Current Gain	$V_{CE} = 2V, I_C = 20mA$ $V_{CE} = 2V, I_C = 1A$	30 60	150 160	400	
V _{CE} (sat)	*Collector-Emitter Saturation Voltage	I _C = 2A, I _B = 0.2A		0.3	0.5	V
V _{BE} (sat)	*Base-Emitter Saturation Voltage	I _C = 2A, I _B = 0.2A		1.0	2.0	V
f _T	Current Gain Bandwidth Product	V _{CE} = 5V, I _E = 0.1A		90		MHz
C _{ob}	Output Capacitance	V _{CB} = 10V, I _E = 0 f = 1MHz		45		pF

* Pulse Test: PW \leq 350µs, Duty Cycle \leq 2% Pulsed

h_{FE} Classification

Classification	R	0	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

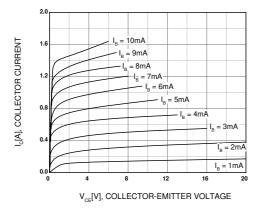


Figure 1. Static Characteristic

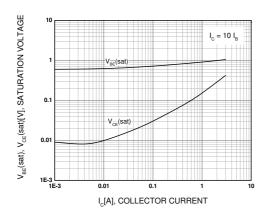
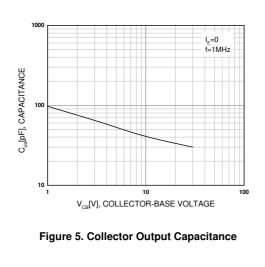


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage



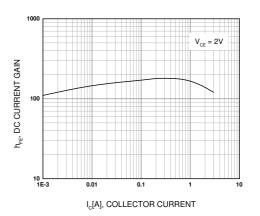


Figure 2. DC current Gain

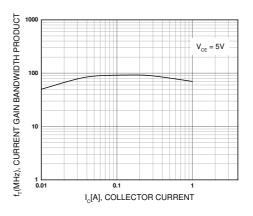
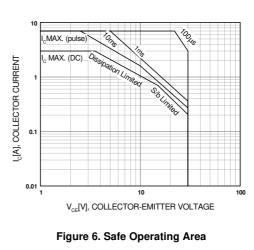


Figure 4. Current Gain Bandwidth Product



Typical Characteristics dT(%), I_c DERATING P_c[W], POWER DISSIPATION S/BL mited 0 L 0 0 . 0 T_c[°C], CASE TEMPERATURE T_c[°C], CASE TEMPERATURE

Figure 7. Derating Curve Of Safe Operating Areas





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NPN Epitaxial Silicon Transistor

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontin- ued by Fairchild semiconductor. The datasheet is printed for reference infor- mation only.

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