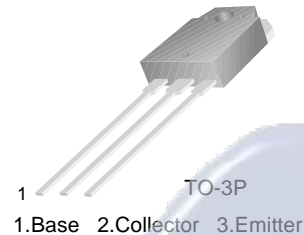


FAIRCHILD
SEMICONDUCTOR™

KSB817

Audio Power Amplifier Car Booster Output Amplifier DC to DC Converter

- High Current Capability
- High Power Dissipation
- Complementary to KSD1047



PNP Planar Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 160	V
V_{CEO}	Collector-Emitter Voltage	- 140	V
V_{EBO}	Emitter-Base Voltage	- 6	V
I_C	Collector Current (DC)	- 8	A
I_{CP}	*Collector Current (Pulse)	- 16	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 40 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -5\text{mA}, I_E = 0$	- 160			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, R_{BE} = \infty$	- 140			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -5\text{mA}, I_C = 0$	- 6			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -80\text{V}, I_E = 0$			- 0.1	mA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = -4\text{V}, I_C = 0$			- 0.1	mA
h_{FE1} h_{FE2}	* DC Current Gain	$V_{CE} = -5\text{V}, I_C = -1\text{A}$ $V_{CE} = -5\text{V}, I_C = -6\text{A}$	60 20		200	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}, I_B = -0.5\text{A}$			- 2.5	V
$V_{BE(on)}$	Base-Emitter ON Voltage	$V_{CE} = -5\text{V}, I_C = -1\text{A}$			- 1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_C = -1\text{A}$		15		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		300		pF
t_{ON}	Turn ON Time	$V_{CC} = 20\text{V}$		0.25		μs
t_F	Fall Time	$I_C = 1\text{A} = 10 \cdot I_{B1} = -10 \cdot I_{B2}$		0.53		μs
t_{STG}	Storage Time	$R_L = 20\Omega$		1.61		μs

* Pulse Test: PW = 20 μs

h_{FE} Classification

Classification	O	Y
h_{FE1}	60 ~ 120	100 ~ 200

Typical Characteristics

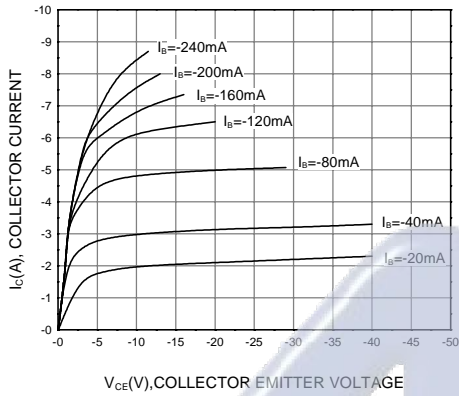


Figure 1. Static Characteristic

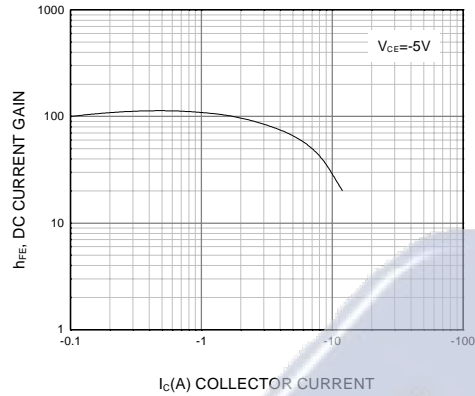


Figure 2. DC current Gain

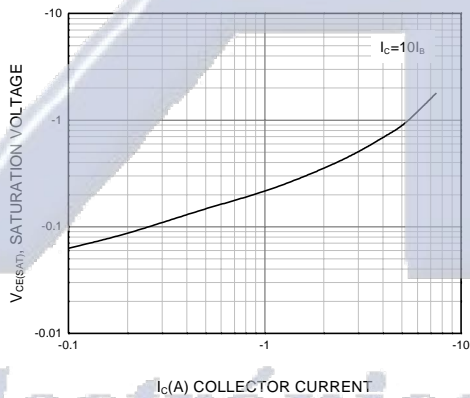


Figure 3. Collector-Emitter Saturation Voltage

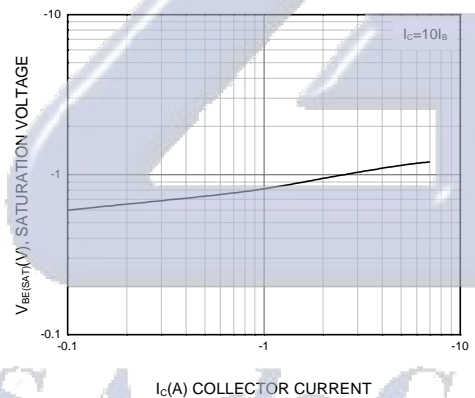


Figure 4. Base-Emitter Saturation Voltage

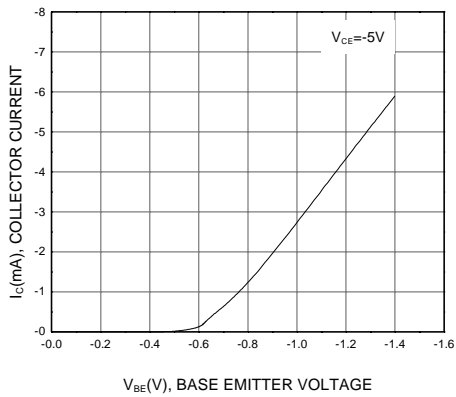


Figure 5. Base-Emitter On Voltage

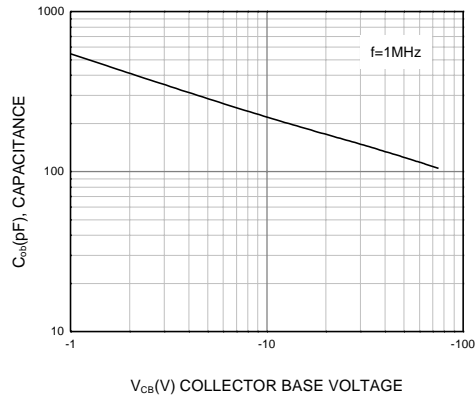


Figure 6. Collector Output Capacitance

Typical Characteristics (Continued)

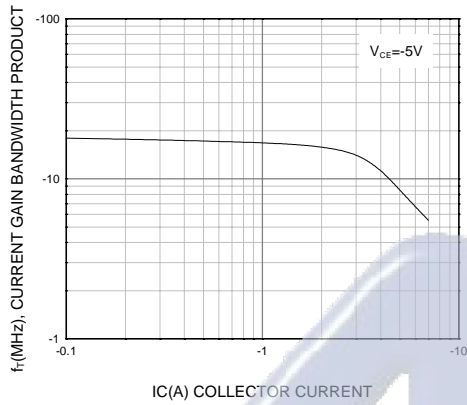


Figure 7. Current Gain Bandwidth Product

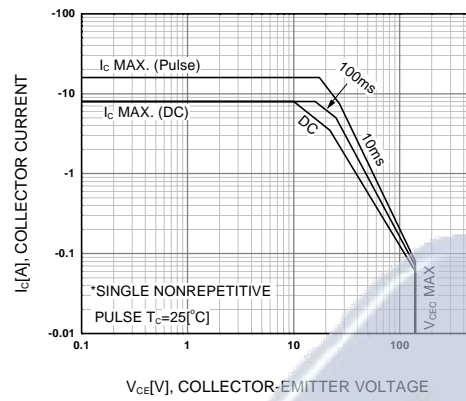


Figure 8. Safe Operating Area

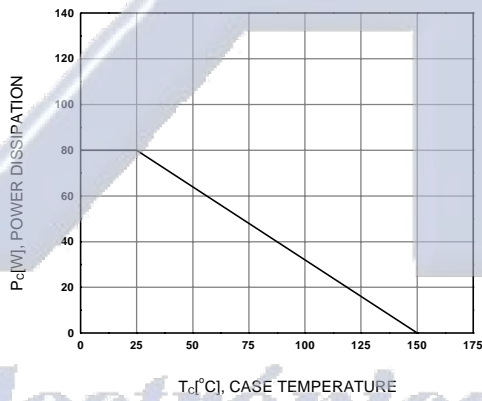


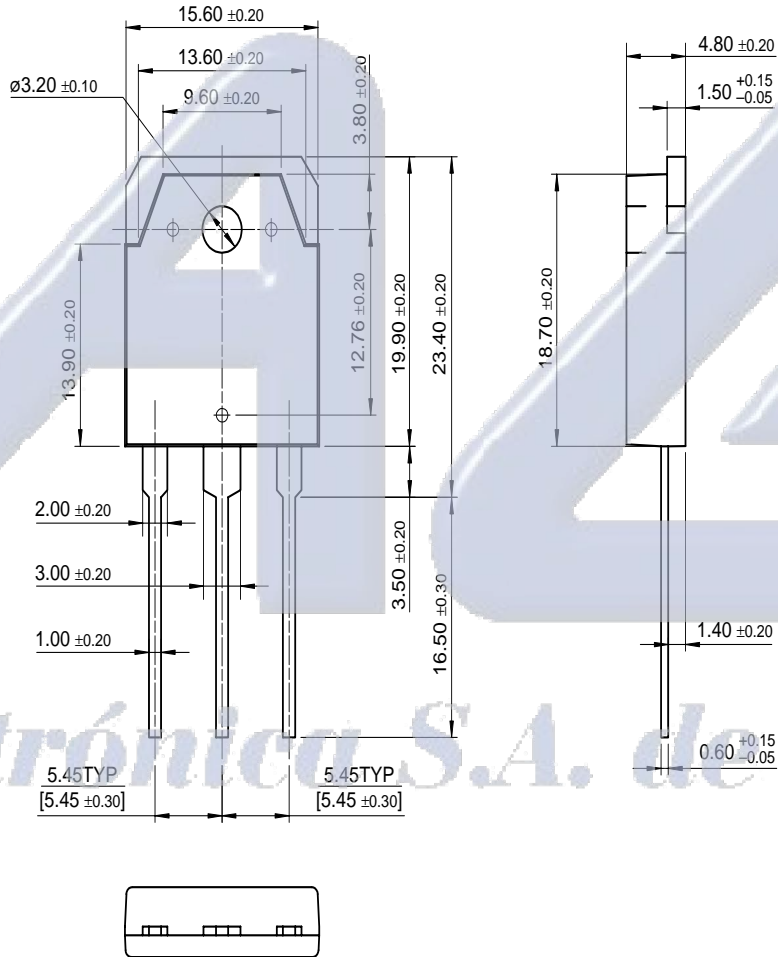
Figure 9. Current Gain Bandwidth Product

Electrónica S.A. de C.V.

KSB817

Package Dimensions

TO-3P



Electrónica S.A. de C.V.

Dimensions in Millimeters