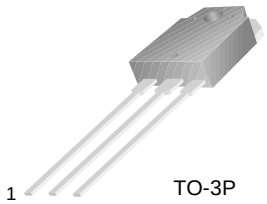
FAIRCHILD SEMICONDUCTOR TM

KSB817

Audio Power Amplifier
Car Booster Output Amplifier
DC to DC Converter

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



1 TO-3P

1.Base 2.Collector 3.Emitter

PNP Planar Silicon Transistor

Absolute Maximum Ratings T_C=25°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°C)	80	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 40 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

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

* Pulse Test: PW = 20µs

h_{FE} Classificntion

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

Typical Characteristics

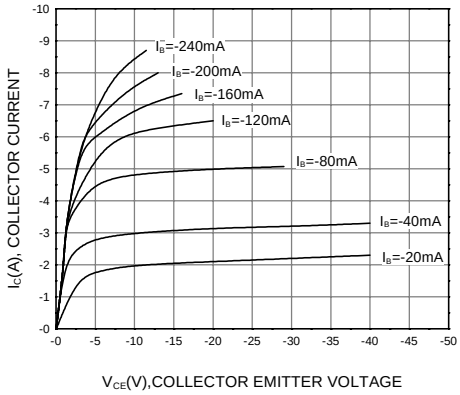


Figure 1. Static Characteristic

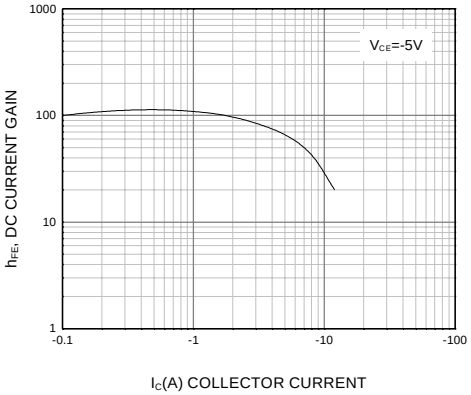


Figure 2. DC current Gain

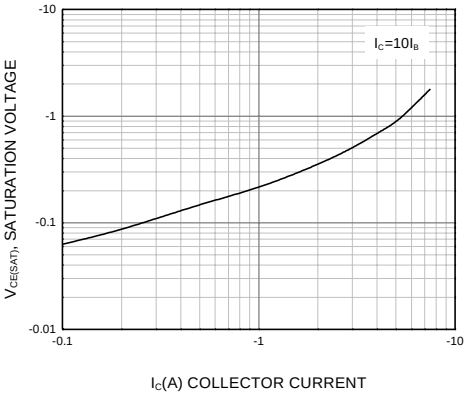


Figure 3. Collector-Emitter Saturation Voltage

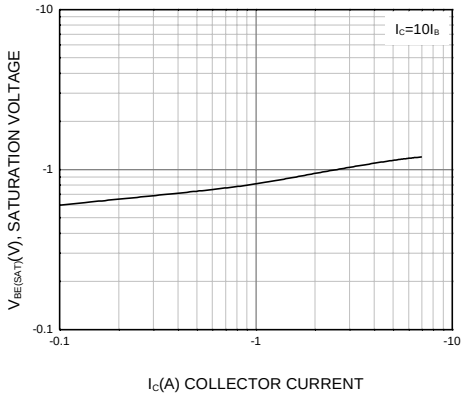


Figure 4. Base-Emitter Saturation Voltage

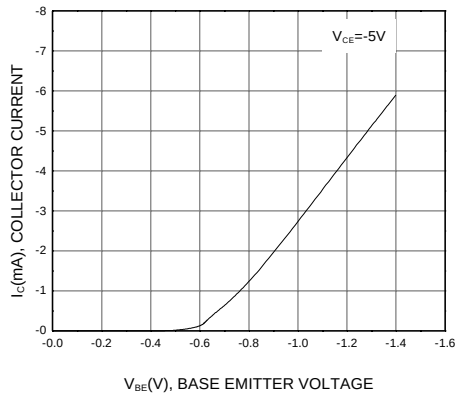


Figure 5. Base-Emitter On Voltage

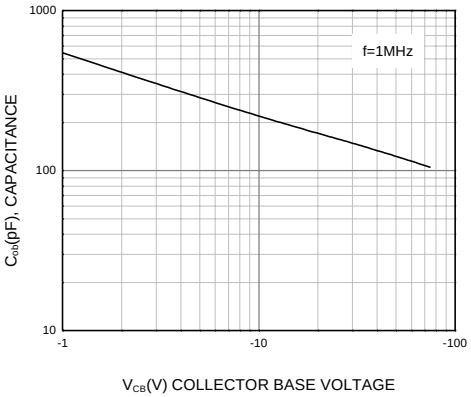


Figure 6. Collector Output Capacitance

Typical Characteristics (Continued)

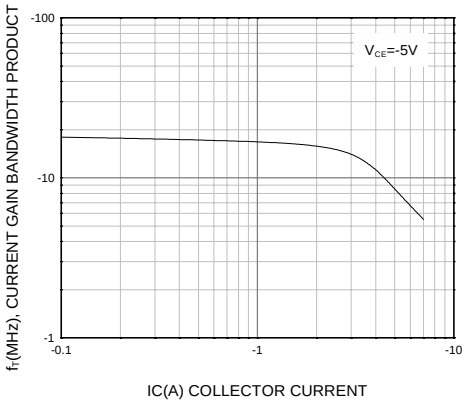


Figure 7. Current Gain Bandwidth Product

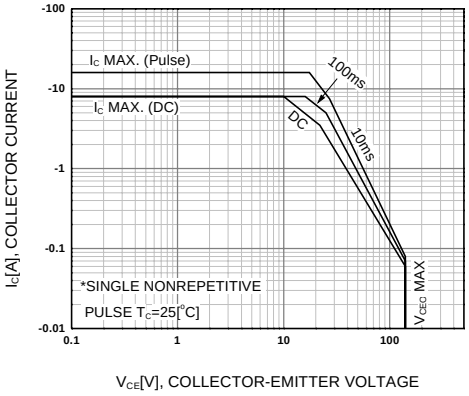


Figure 8. Safe Operating Area

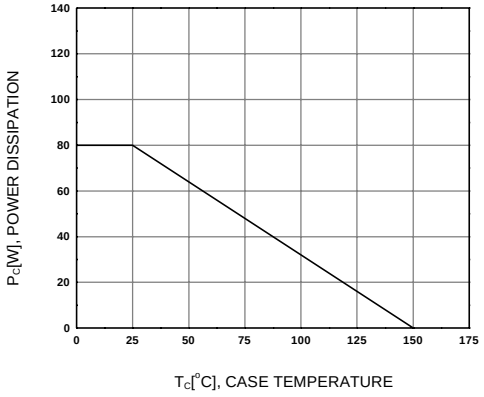
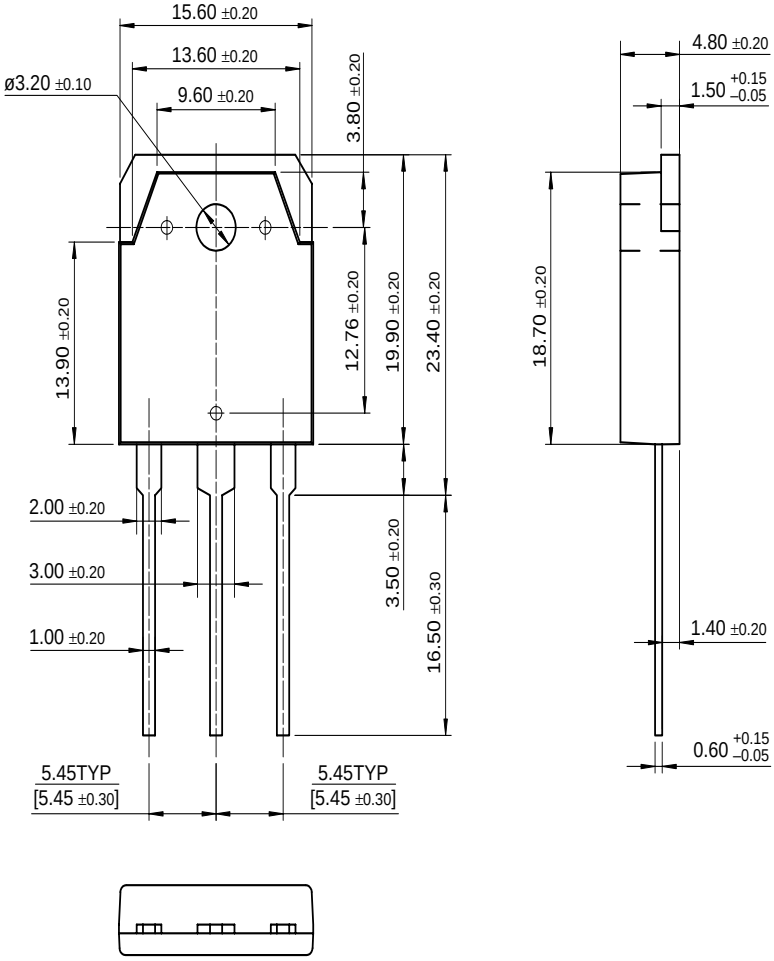


Figure 9. Current Gain Bandwidth Product

Package Demensions

TO-3P



Dimensions in Millimeters

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