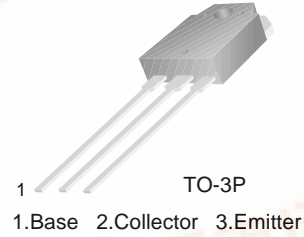


FAIRCHILD
SEMICONDUCTOR™

KSC4468

Audio Power Amplifier

- High Current Capability : $I_C=15A$
- High Power Dissipation
- Wide S.O.A
- Complement to KSA1695



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ 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 ($T_C=25^\circ C$)	80	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

Electrical Characteristics $T_C=25^\circ C$ 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	$I_C=10mA, R_{BE}=\infty$	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	$V_{EB}=4V, I_C=0$			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	$V_{CE}=5V, I_C=1A$		30		MHz
C_{ob}	Output Capacitance	$V_{CB}=10V, f=1MHz$		210		pF
t_{ON}	Turn ON Time	$V_{CC}=20V,$		0.26		μs
t_F	Fall Time	$I_C=1A=10I_{B1}=-10I_{B2}$		0.68		μs
t_{STG}	Storage Time	$R_L=20\Omega$		6.68		μs

* Pulse Test : $PW=20\mu s$

h_{FE} Classification

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



Typical Characteristics

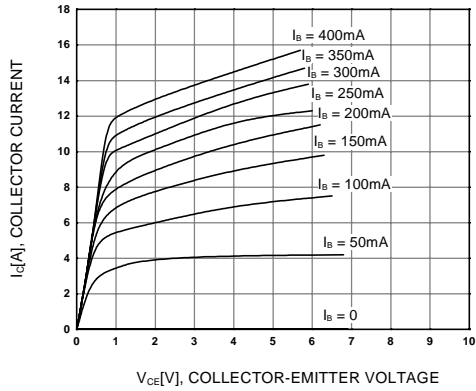


Figure 1. Static Characteristic

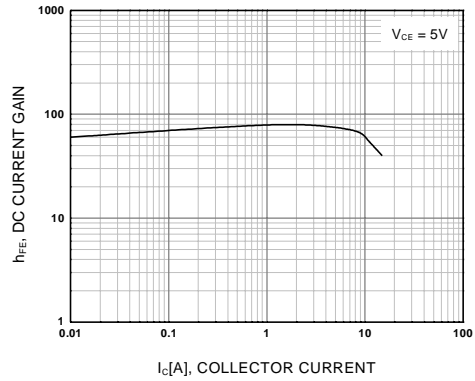


Figure 2. DC current Gain

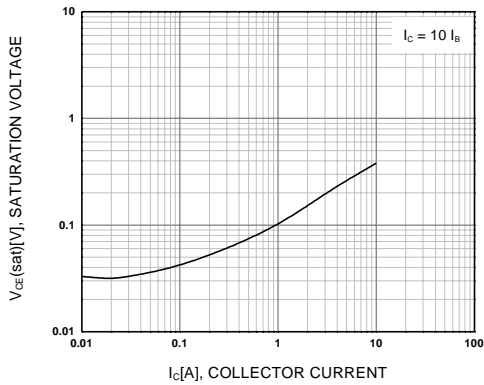


Figure 3. Collector-Emitter Saturation Voltage

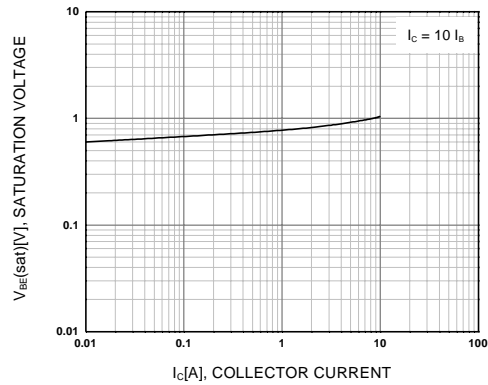


Figure 4. Base-Emitter Saturation Voltage

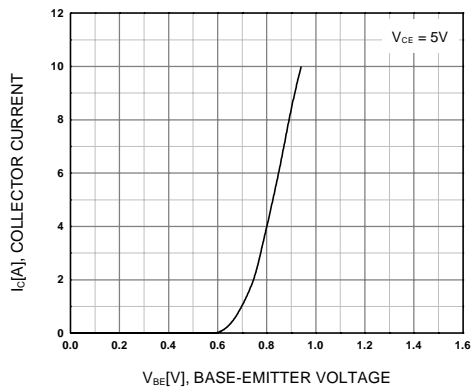


Figure 5. Base-Emitter On Voltage

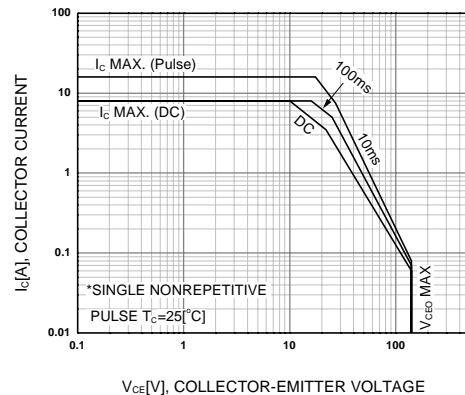


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

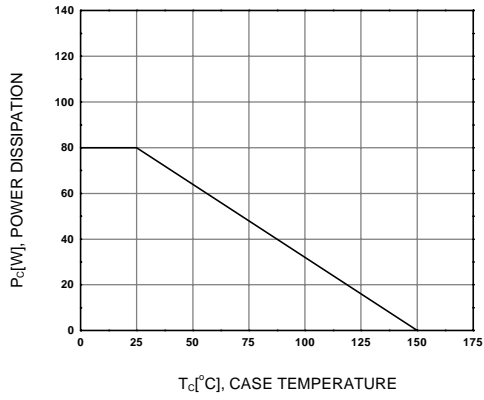
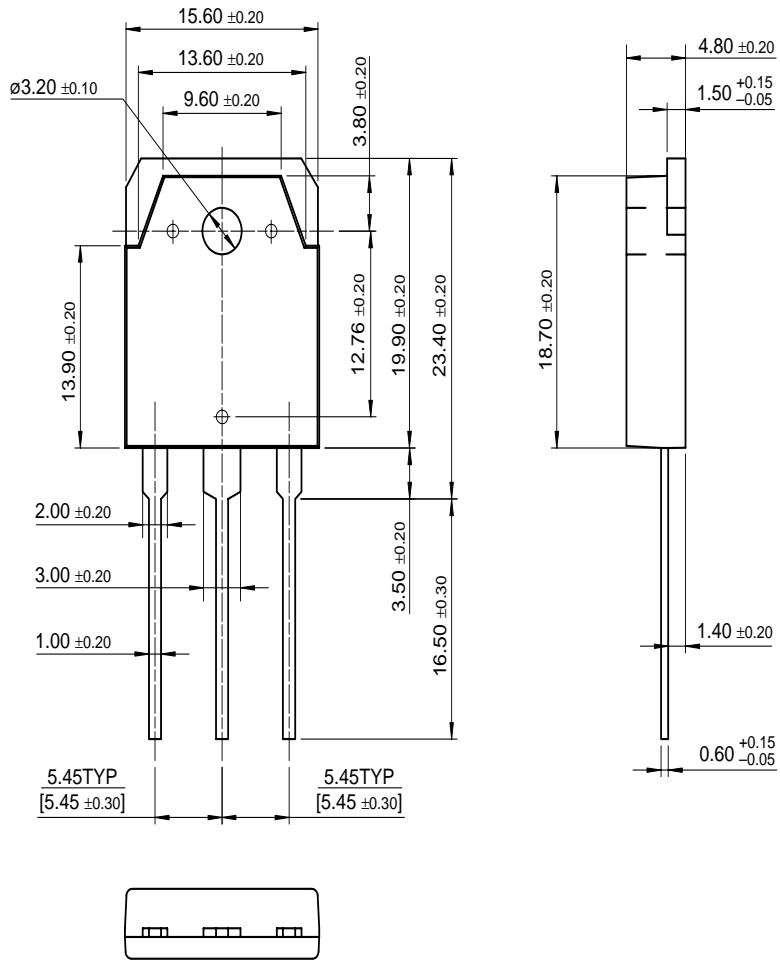


Figure 7. Power Derating

Package Dimensions

KSC4468

TO-3P



Dimensions in Millimeters

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CROSSVOLT™	POPT™	UHC™
E ² CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
FACT Quiet Series™	QST™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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