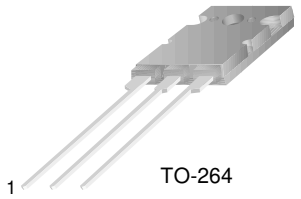
FAIRCHILD
SEMICONDUCTOR®

KSC5200

Audio Power Amplifier

- High Current Capability : I_C=13A
- High Power Dissipation
- Wide S.O.A
- Complement to KSA1943



TO-264

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	230	V
V_{CEO}	Collector-Emitter Voltage	230	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current(DC)	13	A
I_B	Base Current	1.5	A
P_C	Collector Dissipation (T_C=25°C)	130	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 50 ~ 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	230			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=10mA, R_{BE}=∞	230			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=5mA, I_C=0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB}=230V, I_E=0			5.0	uA
I_{EBO}	Emitter Cut-off Current	V_{EB}=5V, I_C=0			5.0	uA
h_{FE1}	* DC Current Gain	V_{CE}=5V, I_C=1A	55		160	
h_{FE2}	DC Current Gain	V_{CE}=5V, I_C=7A	35	60		
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C=8A, I_B=0.8A		0.4	3.0	V
V_{BE}(on)	Base-Emitter ON Voltage	V_{CE}=5V, I_C=7A		1.0	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		200		pF

* Pulse Test : PW=20us

h_{FE} Classification

Classification	R	O
h_{FE1}	55 ~ 110	80 ~ 160

Typical Characteristics

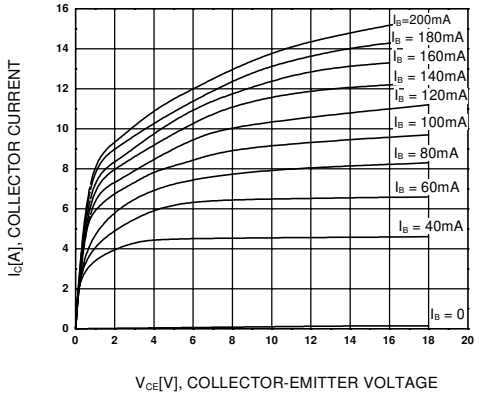


Figure 1. Static Characteristic

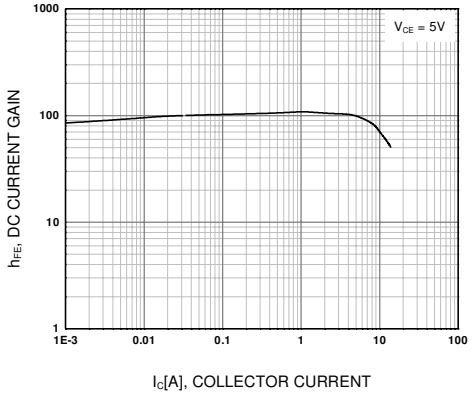


Figure 2. DC current Gain

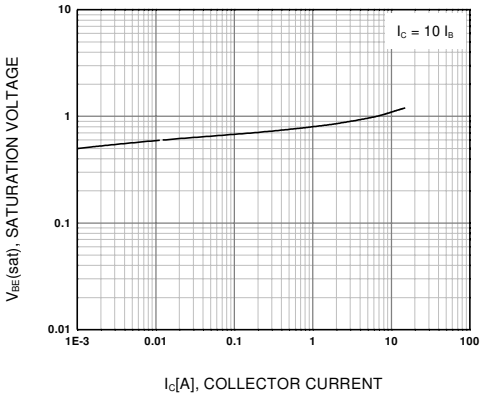


Figure 3. Base-Emitter Saturation Voltage

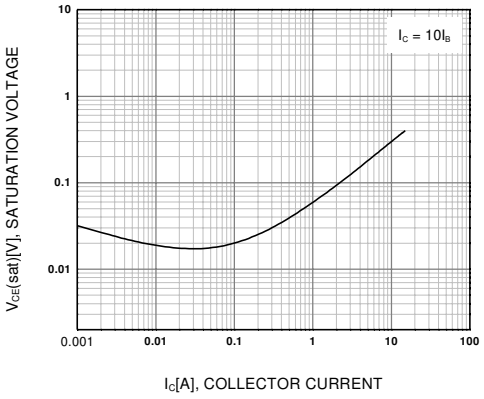


Figure 4. Collector-Emitter Saturation Voltage

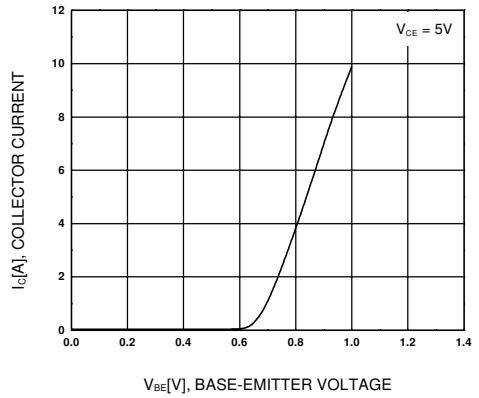


Figure 5. Base-Emitter On Voltage

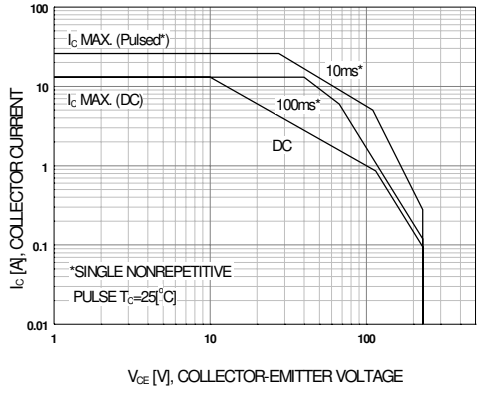


Figure 6. Safe Operating Area

Typical Characteristics

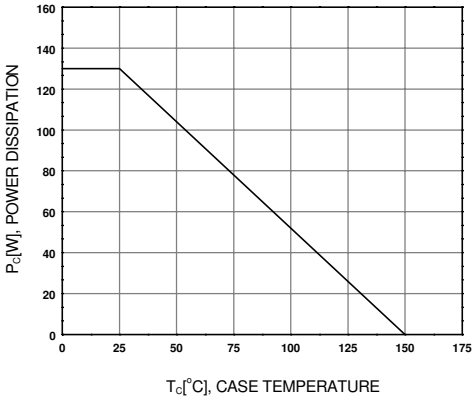
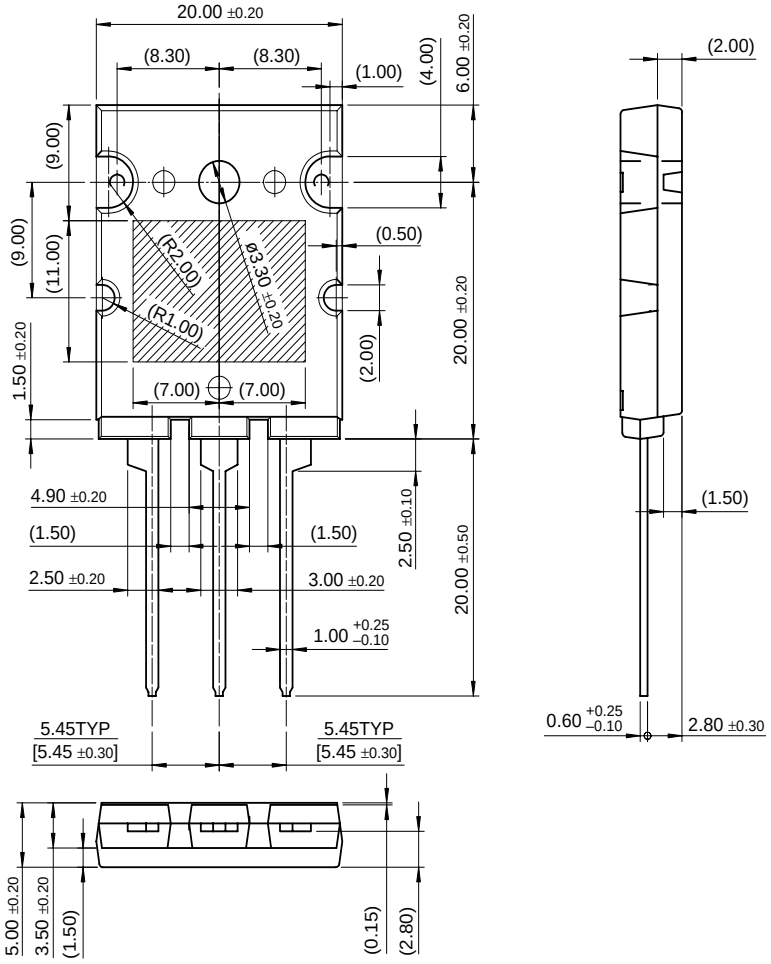


Figure 7. Power Derating

Package Demensions

TO-264



Dimensions in Millimeters

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Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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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 in order to improve design.
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KSC5200
NPN Epitaxial Silicon Transistor

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Features

- High Current Capability: I_C=13A
- High Power Dissipation
- Wide S.O.A.
- Complement to KSA1943

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Applications

Audio Power Amplifier

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSC5200OTU	Full Production	$1.79	TO-264	3	RAIL
KSC5200RTU	Full Production	$1.79	TO-264	3	RAIL

* 1,000 piece Budgetary Pricing

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Models

Package & leads	Condition	Temperature range	Software version	Revision date
PSPICE				
TO-264-3	Electrical/Thermal	-25°C to 100°C	9	Mar 17, 2000

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