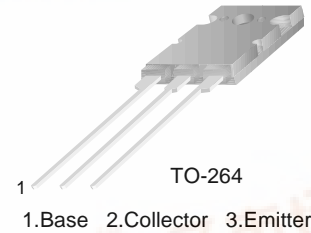


**FAIRCHILD**  
SEMICONDUCTOR®

## KSC5200

### Audio Power Amplifier

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



### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_C=25^\circ C$ 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 ( $T_C=25^\circ C$ )	130	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 50 ~ 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	$I_C=5mA, I_E=0$	230			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10mA, R_{BE}=\infty$	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	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=5V, I_C=0$			5.0	$\mu A$
$h_{FE1}$	* 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

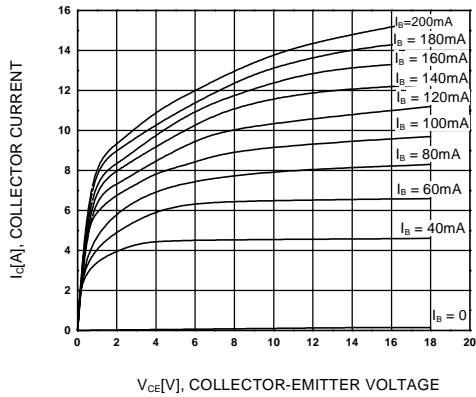


Figure 1. Static Characteristic

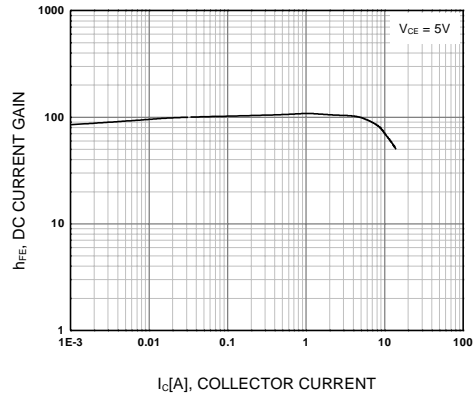


Figure 2. DC current Gain

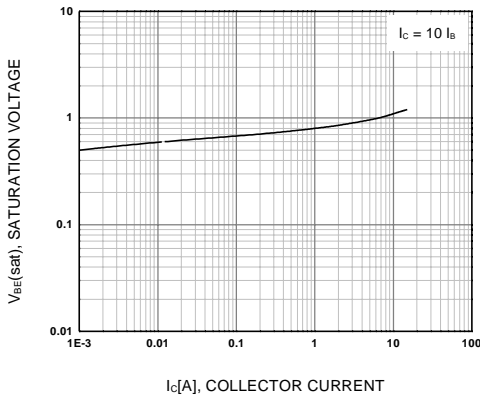


Figure 3. Base-Emitter Saturation Voltage

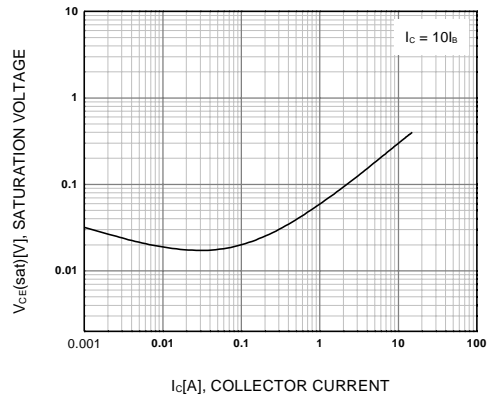


Figure 4. Collector-Emitter Saturation Voltage

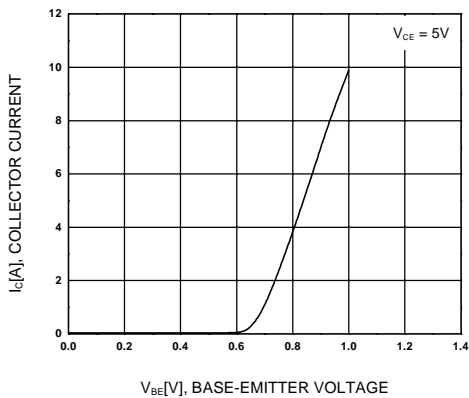


Figure 5. Base-Emitter On Voltage

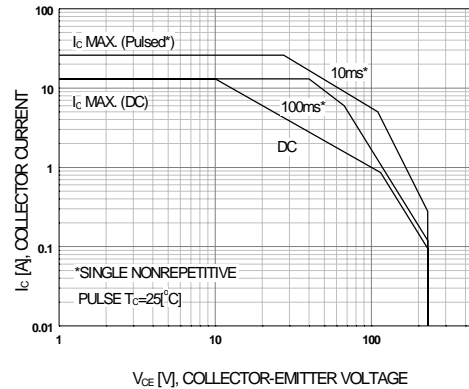


Figure 6. Safe Operating Area

# Typical Characteristics

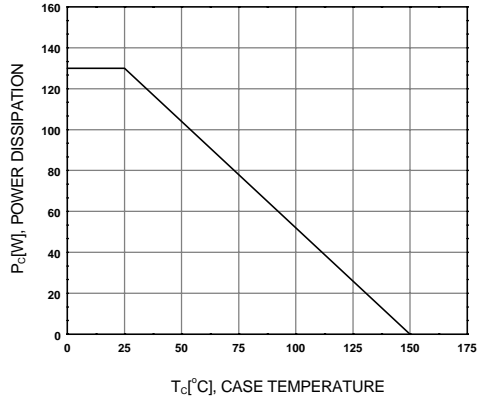
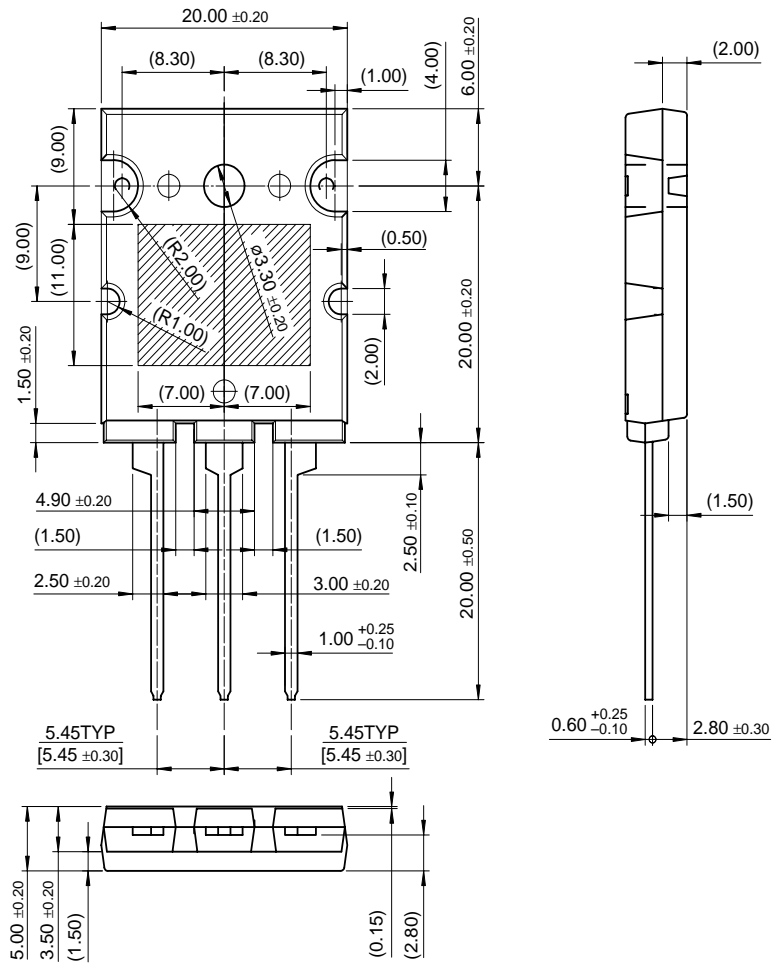


Figure 7. Power Derating

# Package Demensions

KSC5200

## TO-264



Dimensions in Millimeters

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DenseTrench <sup>TM</sup>	GTO <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -6	
DO <sup>ME</sup> <sup>TM</sup>	HiSeC <sup>TM</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>TM</sup> -8	
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FACT <sup>TM</sup>	MicroPak <sup>TM</sup>	Quiet Series <sup>TM</sup>	UHC <sup>TM</sup>	
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