

# KSC2316

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## Audio Power Amplifier Applications

- Driver Stage Amplifier
- Complement to KSA916



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	800	mA
$P_C$	Collector Power Dissipation	900	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ +150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}, I_E=0$	120			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	120			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}, I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=120\text{V}, I_E=0$			0.1	$\mu\text{A}$
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE}=5\text{V}, I_C=10\text{mA}$ $V_{CE}=5\text{V}, I_C=100\text{mA}$	60 80		240	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$			1	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=5\text{V}, I_C=100\text{mA}$		120		MHz
$C_{ob}$	Collector Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			30	pF

### $h_{FE}$ Classification

Classification	O	Y
$h_{FE2}$	80-160	120-240

# Typical Characteristics

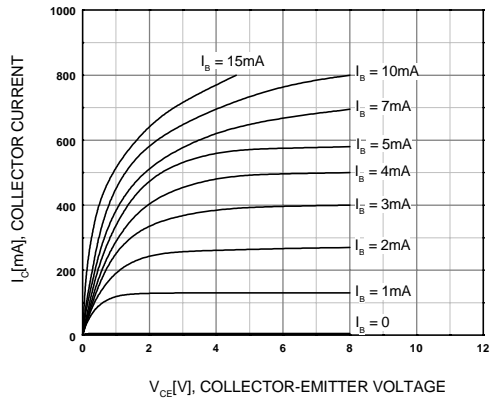


Figure 1. Static Characteristic

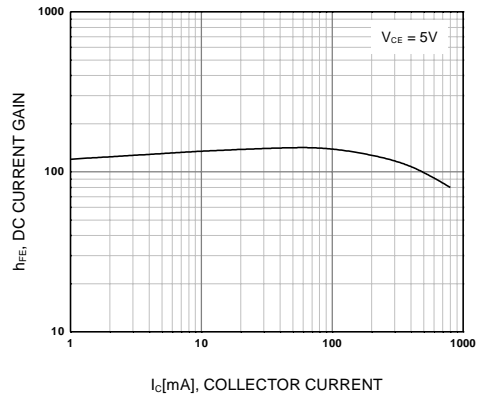


Figure 2. DC current Gain

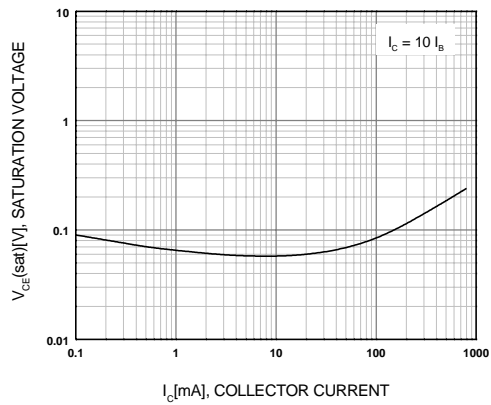


Figure 3. Collector-Emitter Saturation Voltage

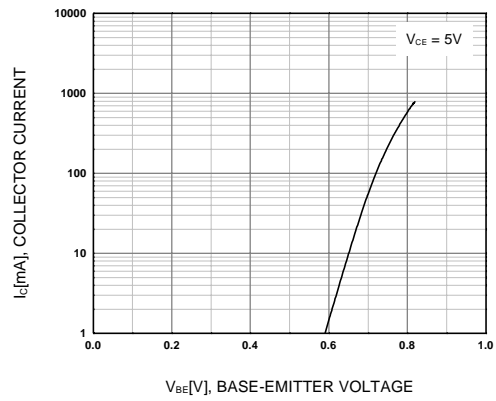


Figure 4. Base-Emitter On Voltage

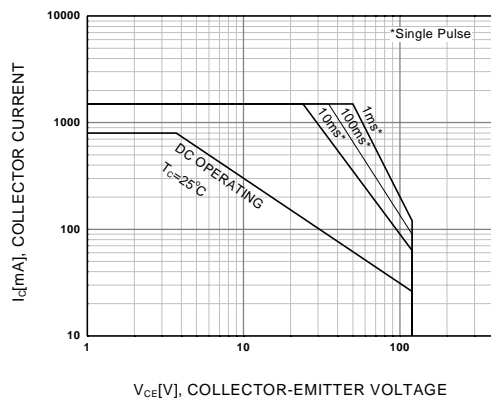
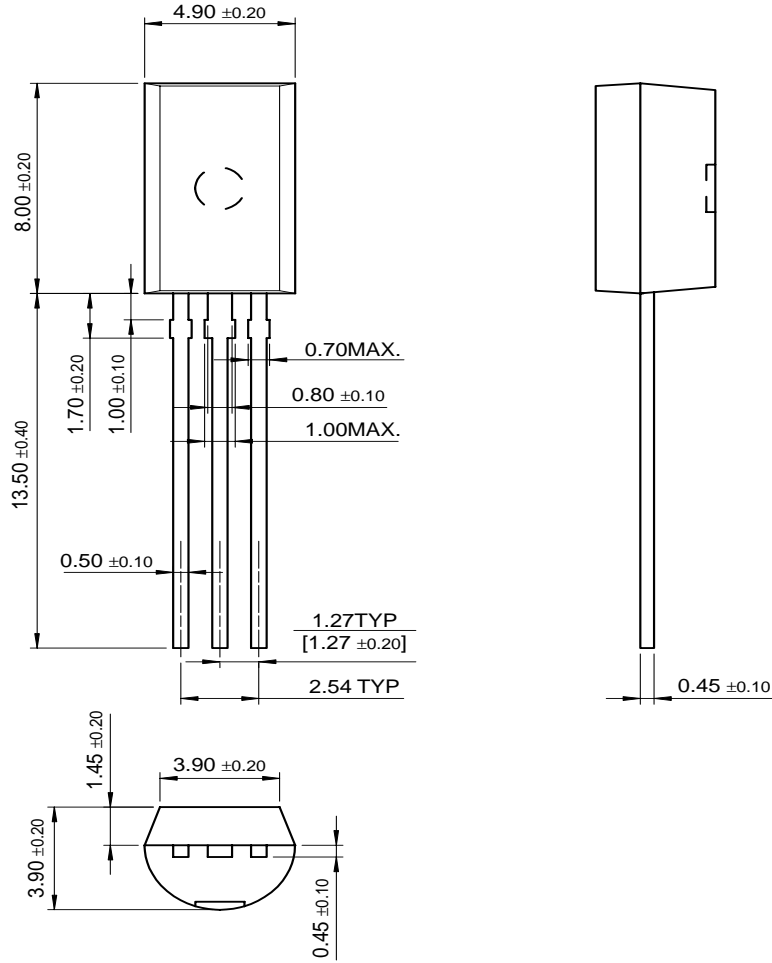


Figure 5. Safe Operating Area

# Package Dimensions

KSC2316

## TO-92L



Dimensions in Millimeters

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