

KSC2316

KSC2316

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	μA
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

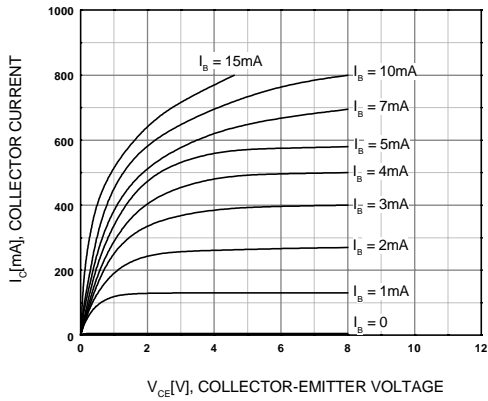


Figure 1. Static Characteristic

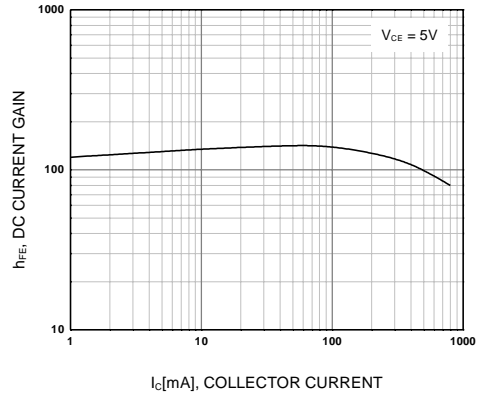


Figure 2. DC current Gain

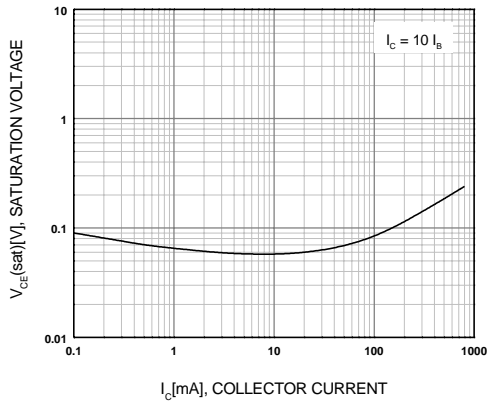


Figure 3. Collector-Emitter Saturation Voltage

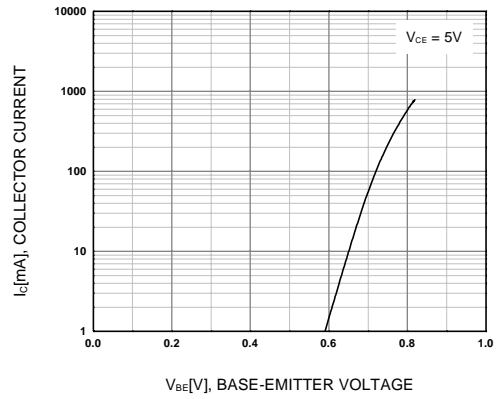


Figure 4. Base-Emitter On Voltage

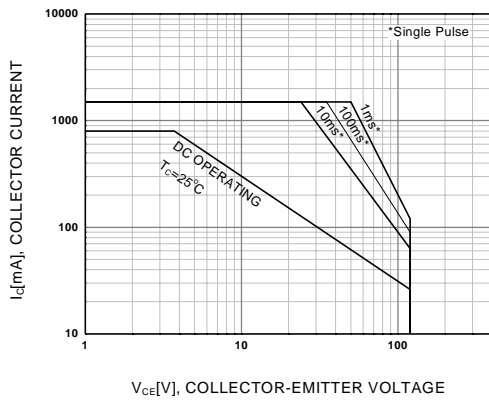


Figure 5. Safe Operating Area

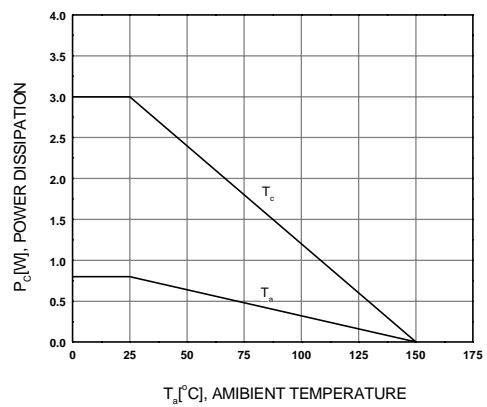
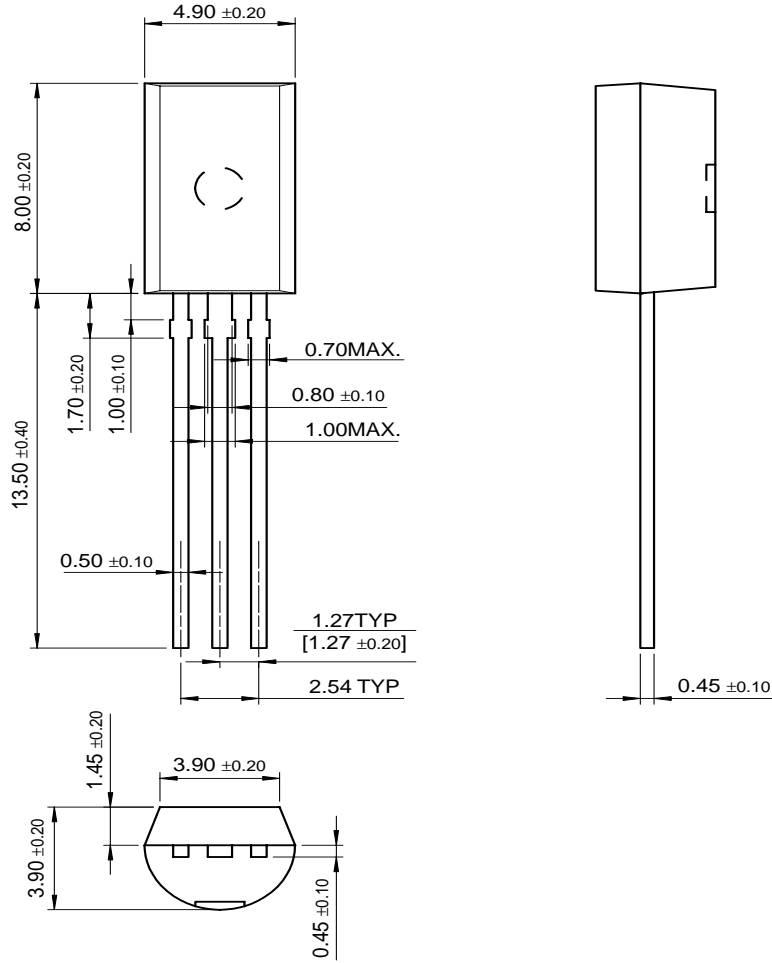


Figure 6. Power Derating

Package Dimensions

KSC2316

TO-92L



Dimensions in Millimeters

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Applications

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSC2316OBU	Full Production	\$0.105	TO-92	3	BULK
KSC2316YTA	Full Production	\$0.105	TO-92	3	TAPE REEL
KSC2316OTA	Full Production	\$0.105	TO-92	3	TAPE REEL
KSC2316YBU	Full Production	\$0.105	TO-92	3	BULK

* 1,000 piece Budgetary Pricing

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