

KSA1281

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Audio Power Amplifier

- Collector Power Dissipation : $P_C=1W$
- 3 Watt Output Application



PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-2	A
P_C	Collector Power Dissipation	1	W
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	$I_C = -100, I_E = 0$	-50			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$	-50			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}, I_C = 0$	-5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -50\text{V}, I_E = 0$			-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0$			-100	nA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$ $V_{CE} = -2\text{V}, I_C = -1.5\text{A}$	70 40		240	
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -0.05\text{mA}$			-1.2	V
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -0.05\text{mA}$			-0.5	V
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		40		pF
f_T	Current Gain Bandwidth Product	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$		100		MHz

h_{FE1} Classification

Classification	O	Y
h_{FE1}	70 ~ 140	120 ~ 240

Typical Characteristics

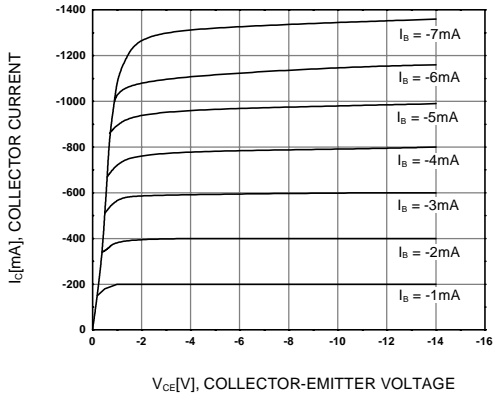


Figure 1. Static Characteristic

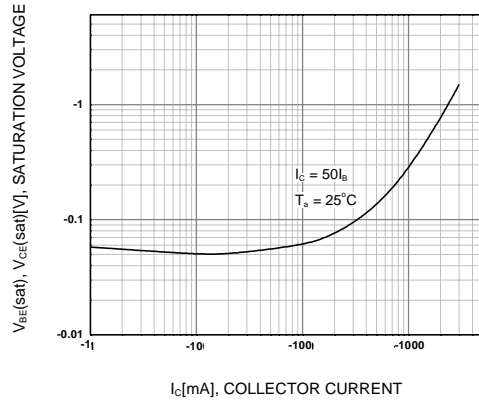


Figure 2. Base-Emitter Saturation Voltage

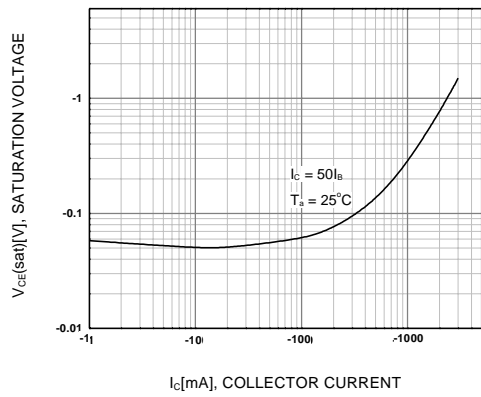


Figure 3. Collector-Emitter Saturation Voltage

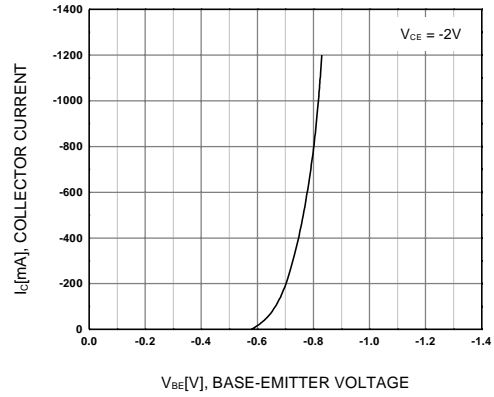


Figure 4. Base-Emitter On Voltage

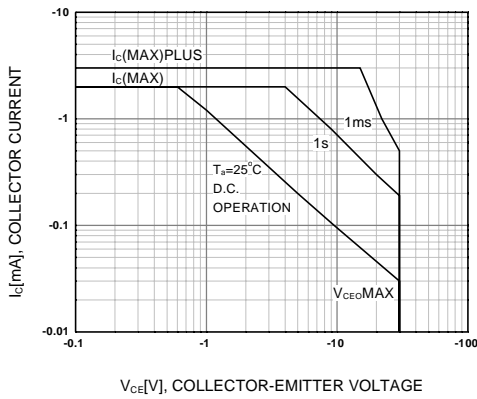


Figure 5. Safe Operating Area

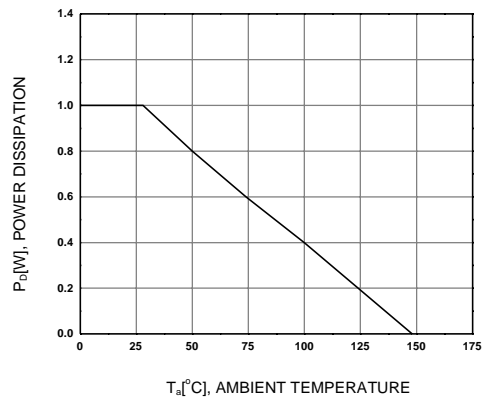


Figure 6. Power Derating

Package Dimensions

KSA1281

TO-92L



Dimensions in Millimeters

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