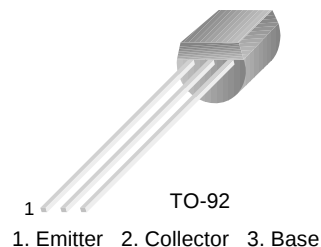


KSA954

KSA954

Audio Frequency Amplifier



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	-80	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-300	mA
I_{CP}	* Collector Current (Pulse)	-500	mA
P_C	Collector Dissipation	600	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

* $PW \leq 10\text{ms}$, Duty Cycles $\leq 50\%$ Pulsed

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = -80\text{V}$, $I_E = 0$			-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = -5\text{V}$, $I_C = 0$			-100	nA
h_{FE1} h_{FE2}	* DC Current Gain	$V_{CE} = -1\text{V}$, $I_C = -50\text{mA}$ $V_{CE} = -2\text{V}$, $I_C = -300\text{mA}$	90 30	200 80	400	
$V_{BE(on)}$	* Base Emitter On Voltage	$V_{CE} = -6\text{V}$, $I_C = -10\text{mA}$	-600	-660	-700	mV
$V_{BE(sat)}$	* Base Emitter Saturation Voltage	$I_C = -300\text{mA}$, $I_B = -30\text{mA}$		-0.85	-1.2	V
$V_{CE(sat)}$	Collector -Emitter Saturation Voltage	$I_C = -300\text{mA}$, $I_B = -30\text{mA}$		-0.15	-0.6	V
C_{ob}	Output Capacitance	$V_{CB} = -6\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		13	25	pF
f_T	Current Gain-Bandwidth Product	$V_{CE} = -6\text{V}$, $I_C = -10\text{mA}$	50	100		MHz

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycles $\leq 2\%$

h_{FE1} Classification

Classification	O	Y	G
h_{FE1}	90 ~ 180	135 ~ 270	200 ~ 400

Typical Characteristics

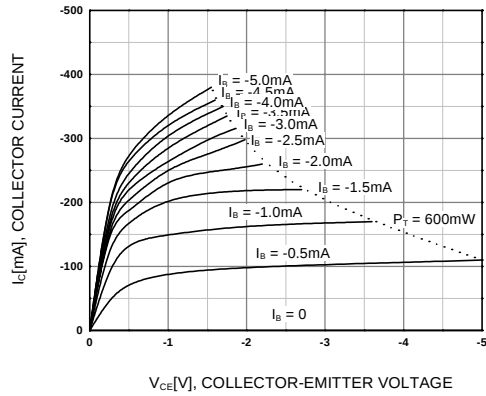


Figure 1. Static Characteristic

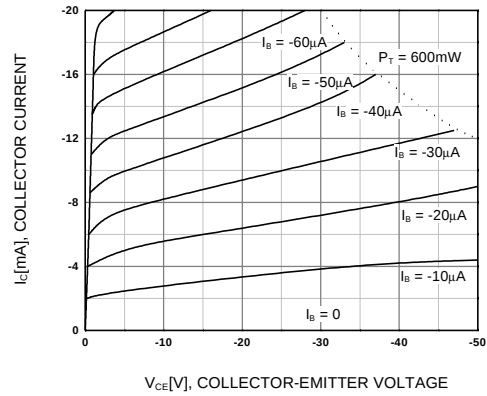


Figure 2. Static Characteristic

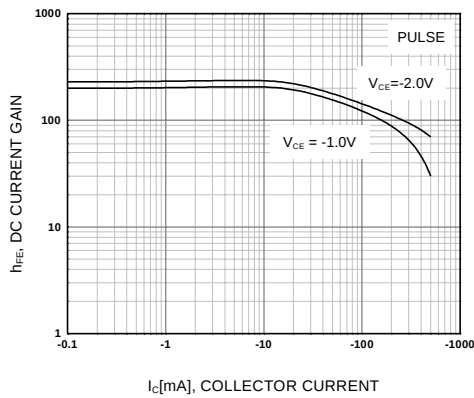


Figure 3. DC current Gain

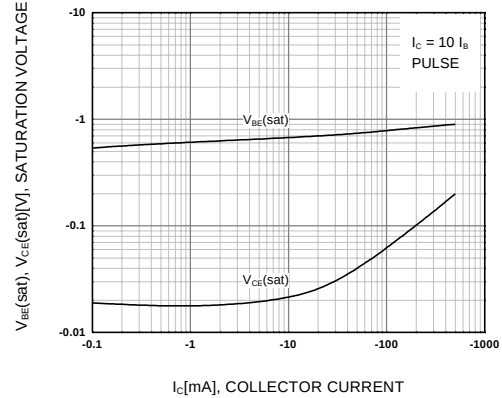


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

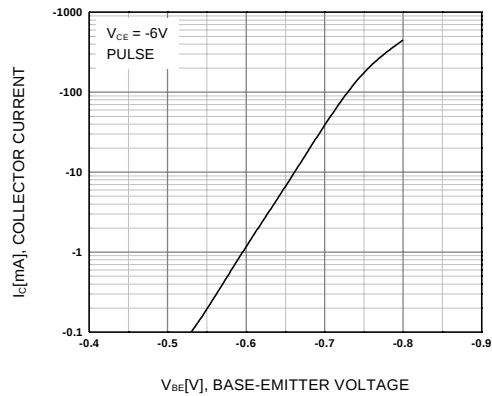


Figure 5. Base-Emitter On Voltage

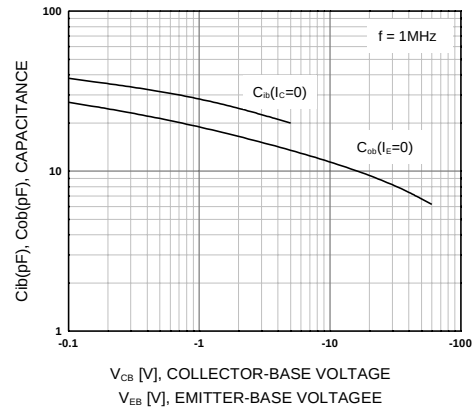


Figure 6. Input Output Capacitance

Typical Characteristics (Continued)

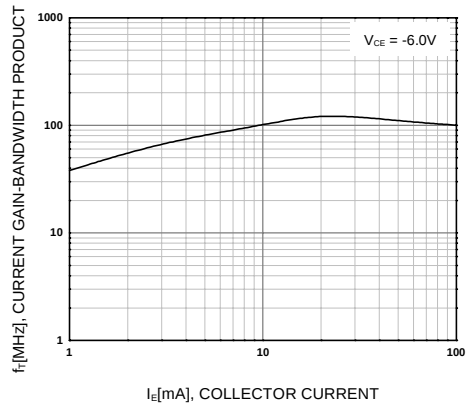


Figure 7. Gain Bandwidth Product

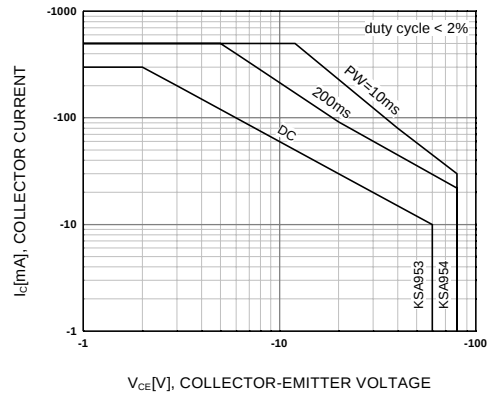


Figure 8. Safe Operating Area

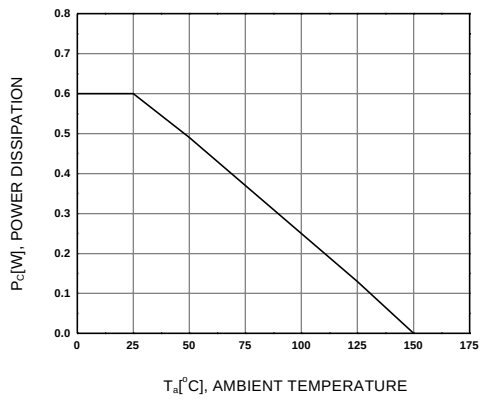


Figure 9. Power Derating

Package Dimensions

TO-92



Dimensions in Millimeters

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