

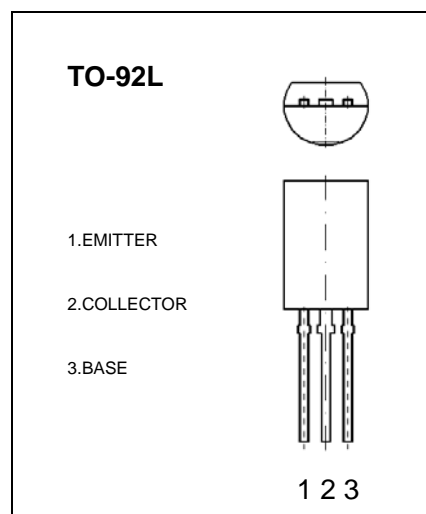


## TO-92L Plastic-Encapsulate Transistors

### KSA928A TRANSISTOR ( PNP )

#### FEATURE

- Audio power amplifier
- Complement to Application



#### MAXIMUM RATINGS\* $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CB0}$	Collector-Base Voltage	-30	V
$V_{CEO}$	Collector-Emitter Voltage	-30	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-2	A
$P_C$	Collector Dissipation	1	W
$T_J, T_{stg}$	Junction and Storage Temperature	-55 to +150	$^{\circ}\text{C}$

#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYPE	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CB0}$	$I_C = -100 \mu\text{A}, I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C = -10 \text{mA}, I_B = 0$	-30			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E = -1 \text{mA}, I_C = 0$	-5			V
Collector cut-off current	$I_{CB0}$	$V_{CB} = -30 \text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 \text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -2 \text{V}, I_C = -500 \text{mA}$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5 \text{A}, I_B = -0.03 \text{A}$			-2	V
Base-emitter voltage	$V_{BE}$	$I_C = -500 \text{mA}, V_{CE} = -2 \text{V}$			-1	V
Transition frequency	$f_T$	$V_{CE} = -2 \text{V}, I_C = -500 \text{mA}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{V}, I_E = 0, f = 1 \text{MHz}$		48		pF

#### CLASSIFICATION OF $h_{FE}$

Rank	O	Y
Range	100-200	160-320

# Typical Characteristics

# KSA928A

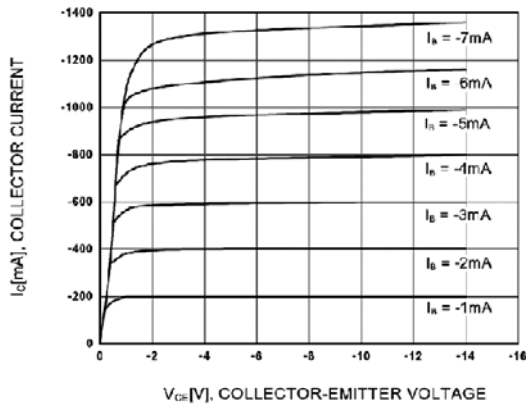


Figure 1. Static Characteristic

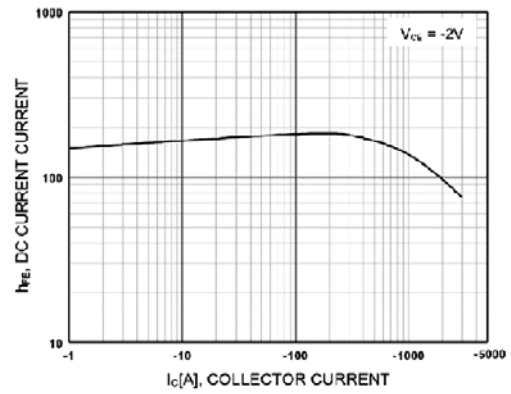


Figure 2. DC current Gain

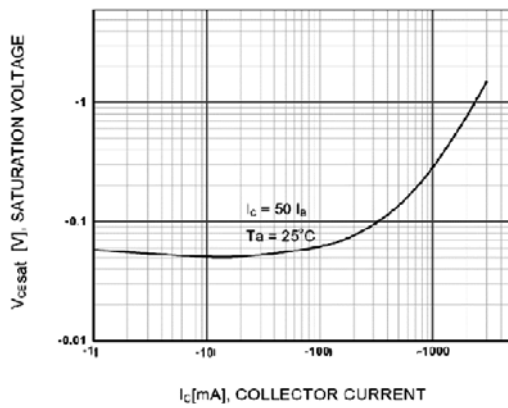


Figure 3. Collector-Emitter Saturation Voltage

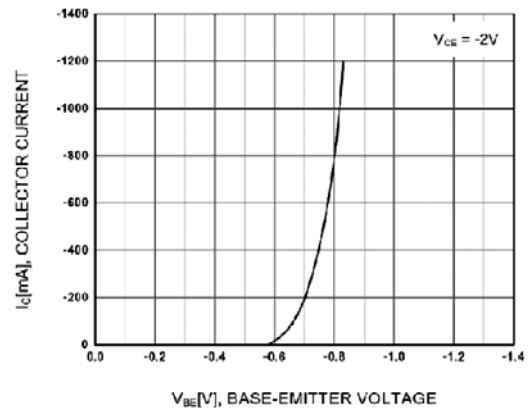


Figure 4. Base-Emitter On Voltage

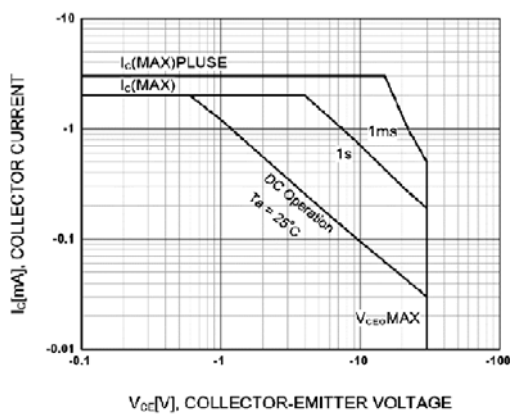


Figure 5. Safe Operating Area

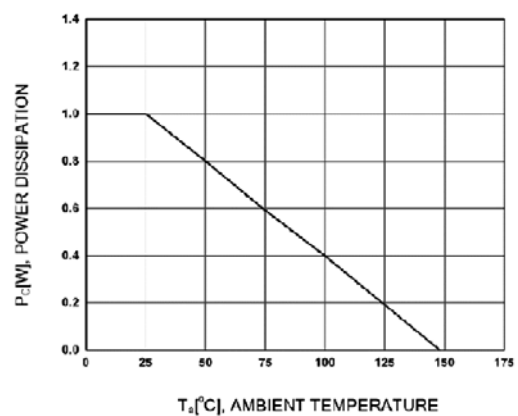


Figure 6. Power Derating