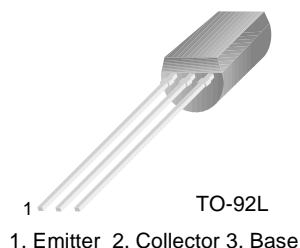


KSA931

Low Frequency Amplifier & Medium Speed Switching

- Complement to KSC2331
- Collector-Base Voltage : $V_{CBO} = -80V$
- Collector Power Dissipation : $P_C = 1W$



PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-8	V
I_C	Collector Current	-700	mA
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu A, I_E = 0$	-80			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10mA, I_B = 0$	-60			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -100\mu A, I_C = 0$	-8			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -60V, I_E = 0$			-0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5V, I_C = 0$			-0.1	μA
h_{FE}	* DC Current Gain	$V_{CE} = -2V, I_C = -50mA$	40		240	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = -500mA, I_B = -50mA$		-0.3	-0.7	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = -500mA, I_B = -50mA$		-0.9	-1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -10V, I_C = -50mA$		100		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$		13		pF

* Pulse Test: $PW \leq 350\mu s$, Duty cycle $\leq 2\%$

h_{FE} Classification

Classification	R	O	Y
h_{FE}	40 ~ 80	70 ~ 140	120 ~ 240

Typical Characteristics

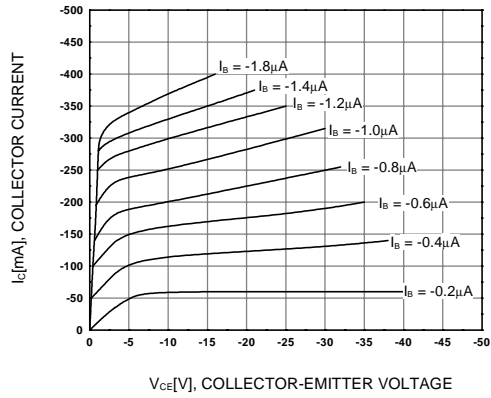


Figure 1. Static Characteristic

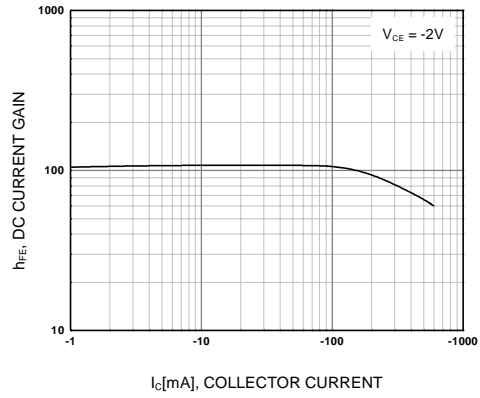


Figure 2. DC current Gain

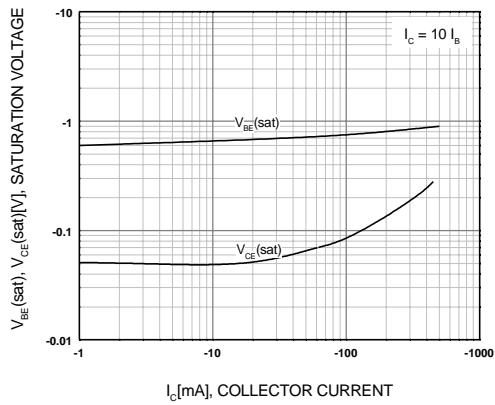


Figure 3. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

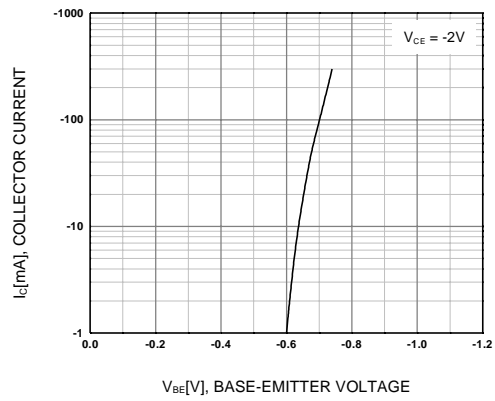


Figure 4. Base-Emitter On Voltage

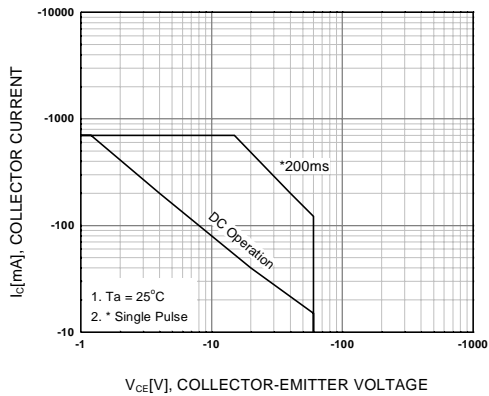


Figure 5. Safe Operating Area

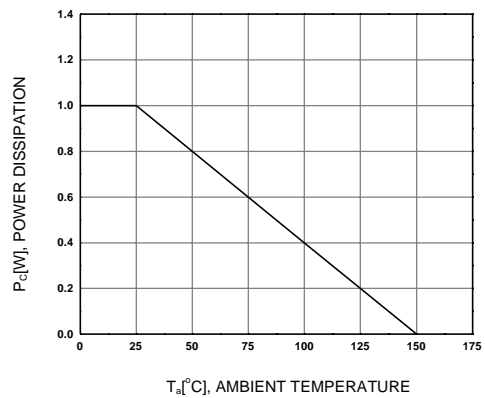
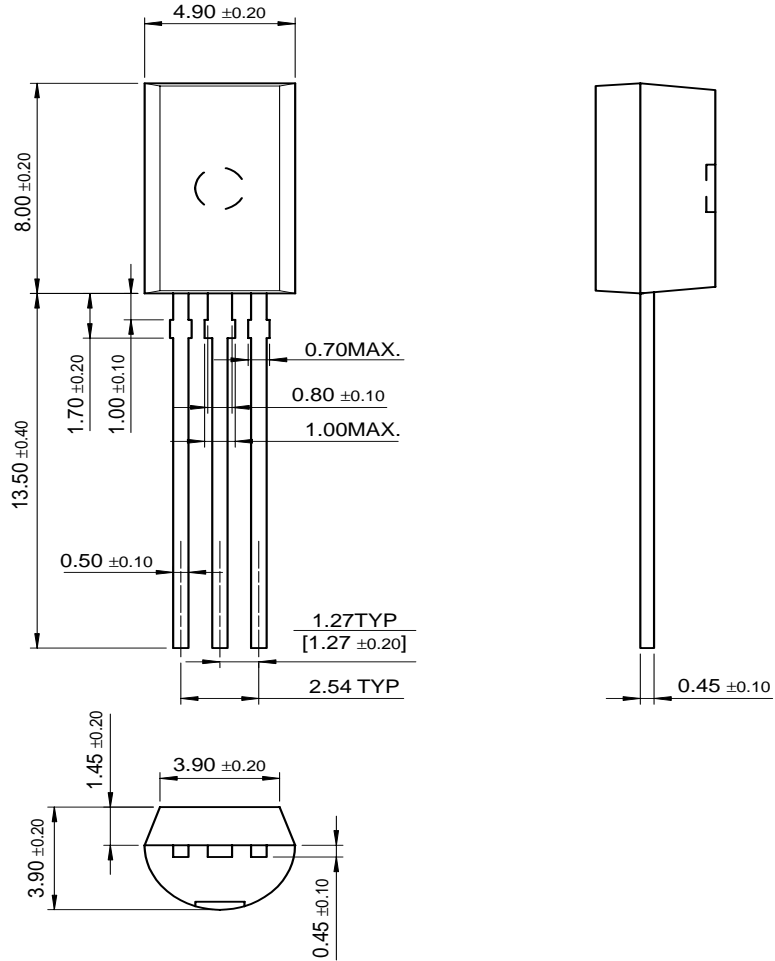


Figure 6. Power Derating

Package Dimensions

TO-92L



Dimensions in Millimeters

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