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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD
SEMICONDUCTOR®

KSA931

Low Frequency Amplifier & Medium Speed Switching

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

TO-92L

1. Emitter 2. Collector 3. Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°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	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, 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= -100μA, 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 Productor	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≤350μs, Duty cycle≤2%

h_{FE} Classification

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

Typical Characteristics

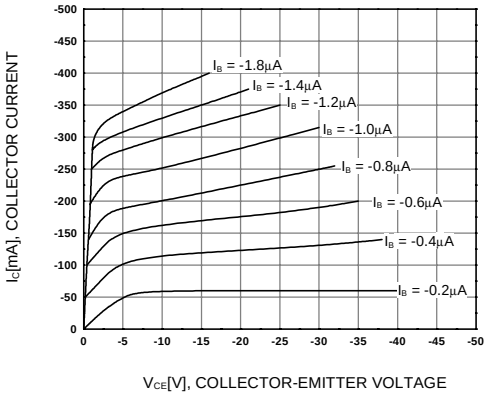


Figure 1. Static Characteristic

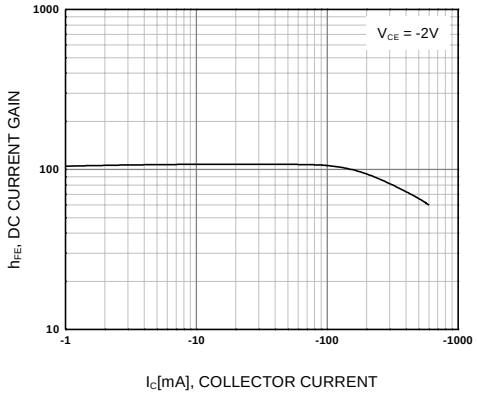


Figure 2. DC current Gain

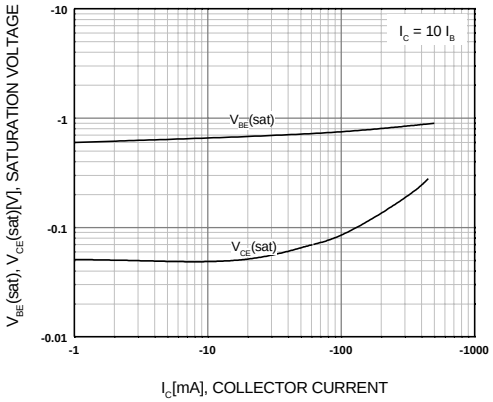


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

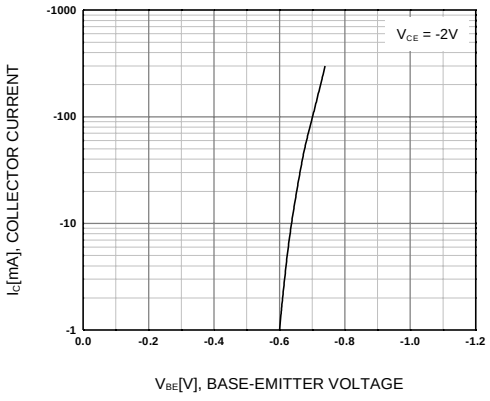


Figure 4. Base-Emitter On Voltage

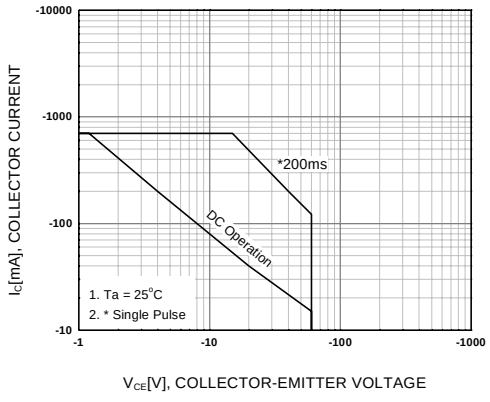


Figure 5. Safe Operating Area

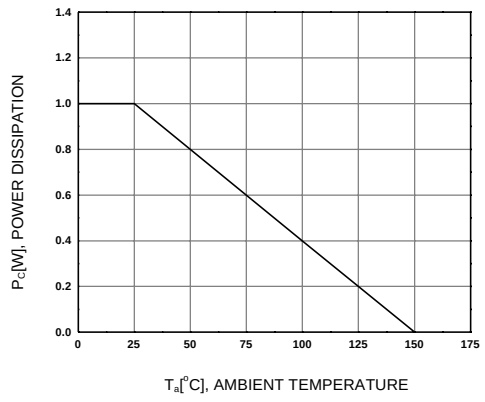
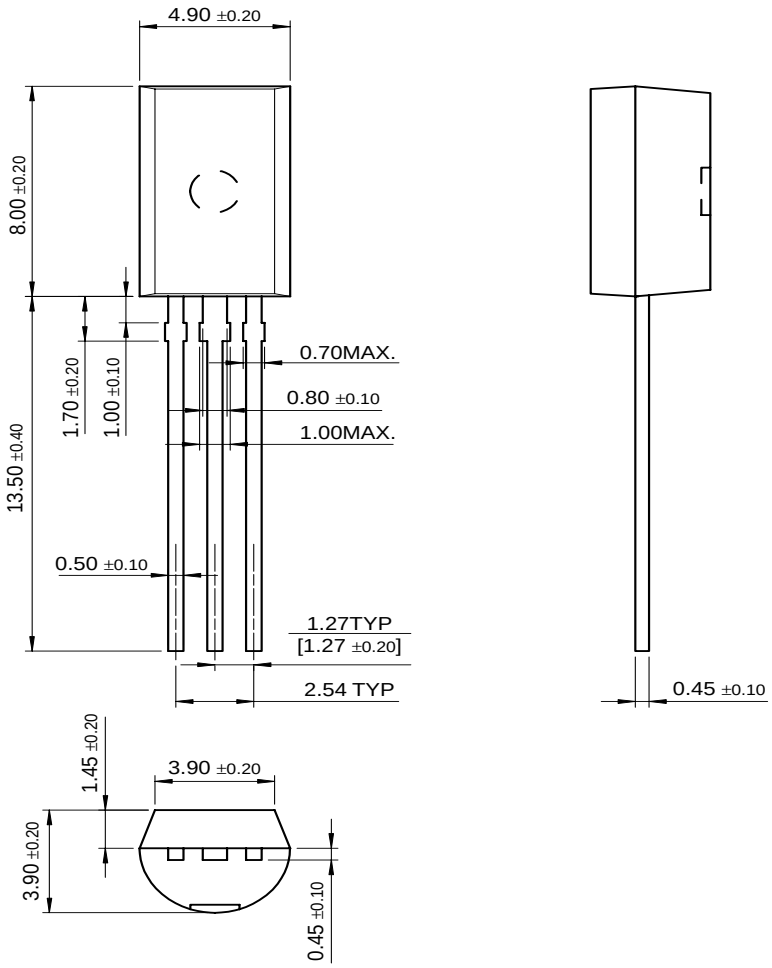


Figure 6. Power Derating

Package Dimensions

TO-92L



Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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