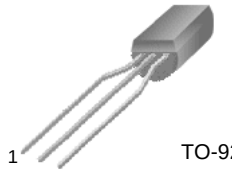
FAIRCHILD SEMICONDUCTOR®

December 2011

KSC2331
NPN Epitaxial Silicon Transistor

Features

- Low Frequency Amplifier & Medium Speed Switching
- Complement to KSA931
- High Collector-Base Voltage : V_{CBO}=80V
- Collector Current : I_C=700mA
- Collector Dissipation : P_C=1W



TO-92L

1. Emitter 2. Collector 3. Base

Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	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 to 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=10μA, 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		0.2	0.7	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=500mA, I_B=50mA		0.86	1.20	V

h_{FE} Classification

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

Typical Performance Characteristics

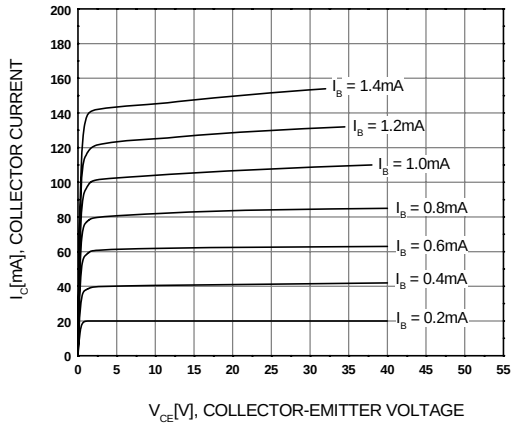


Figure 1. Static Characteristic

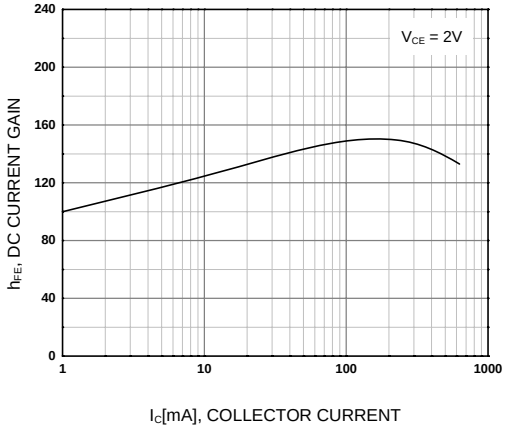


Figure 2. DC current Gain

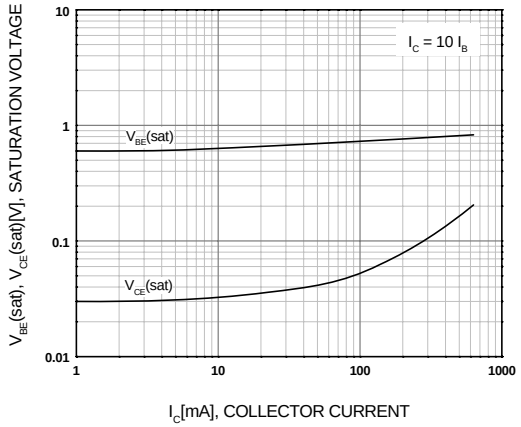


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

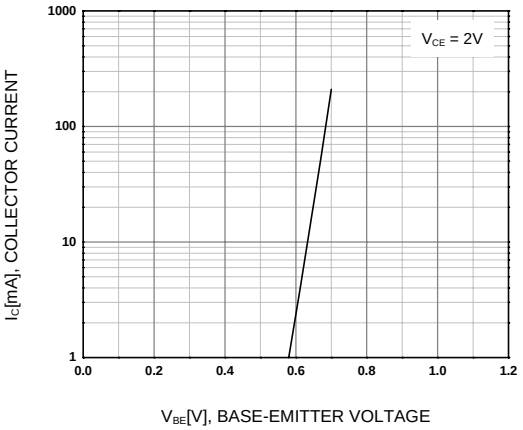


Figure 4. Base-Emitter On Voltage

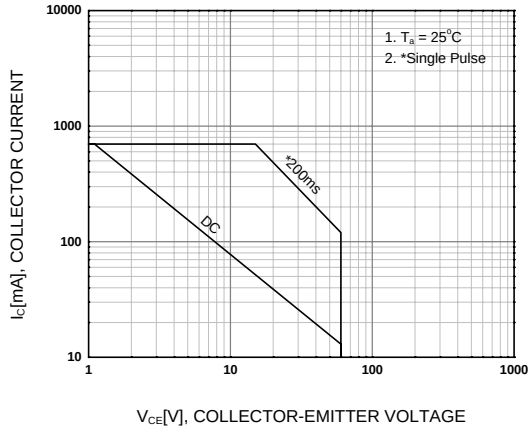


Figure 5. Safe Operating Area

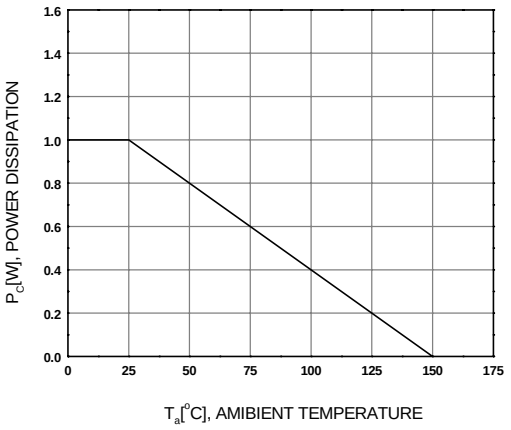


Figure 6. Power Derating

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