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Fairchild Semiconductor
KSC3502ES

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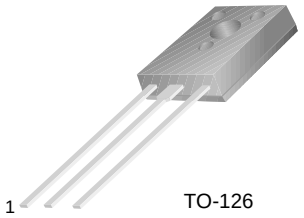
FAIRCHILD SEMICONDUCTOR TM

KSC3502

CRT Display, Video Output

- High Voltage : V_{CEO}=200V
- Low Reverse Transfer Capacitance: C_{re}=1.2pF @ V_{CB}=30V



TO-126

1. Emitter 2.Collector 3.Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	100	mA
I_{CP}	Collector Current (Pulse)	200	mA
P_C	Collector Dissipation (T_C=25°C)	5	W
P_C	Collector Dissipation (T_a=25°C)	1.2	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 10μA, I_E = 0	200			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 1mA, I_B = 0	200			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 10μA, I_C = 0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 150V, I_E = 0			0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V, I_C = 0			0.1	μA
h_{FE}	DC Current Gain	V_{CE} = 10V, I_C = 10mA	40		320	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 20mA, I_B = 2mA			0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 20mA, I_B = 2mA			1	V
f_T	Current Gain Bandwidth Product	V_{CE} = 30V, I_C = 10mA		150		MHz
C_{ob}	Output Capacitance	V_{CB} = 30V, f= 1MHz		1.7		pF
C_{re}	Reverse Transfer Capacitance	V_{CB} = 30V, f= 1MHz		1.2		pF

h_{FE} Classification

Classification	C	D	E	F
h_{FE}	40 ~ 80	60 ~ 120	100 ~ 200	160 ~ 320

Typical Characteristics

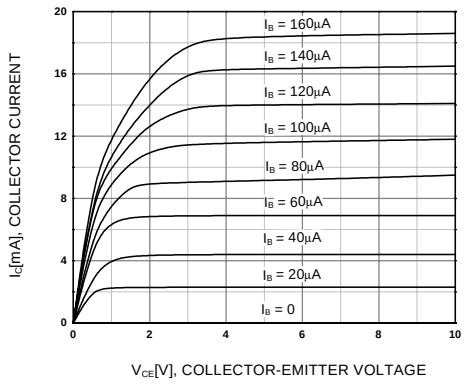


Figure 1. Static Characteristic

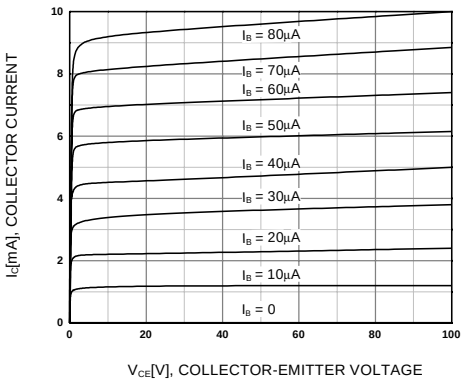


Figure 2. Static Characteristic

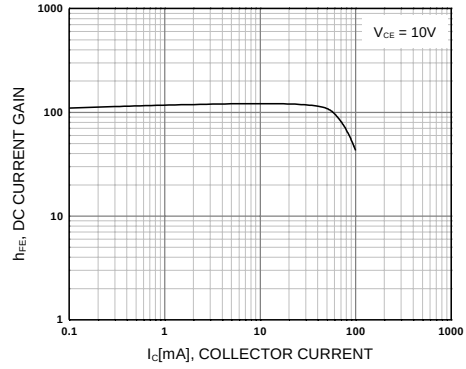


Figure 3. DC current Gain

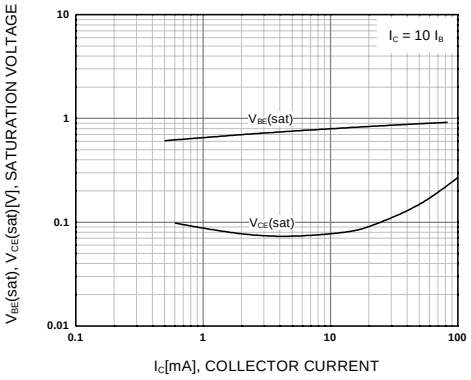


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

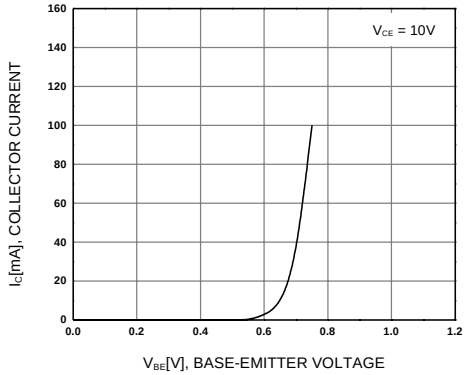


Figure 5. Base-Emitter On Voltage

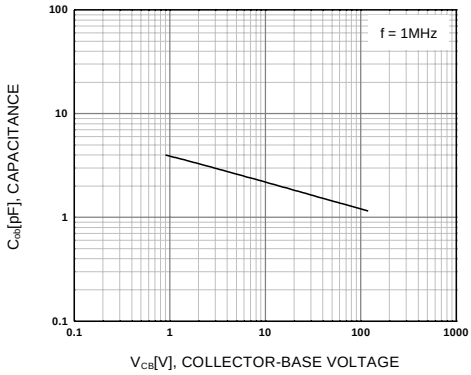


Figure 6. Collector Output Capacitance

Typical Characteristics (Continued)

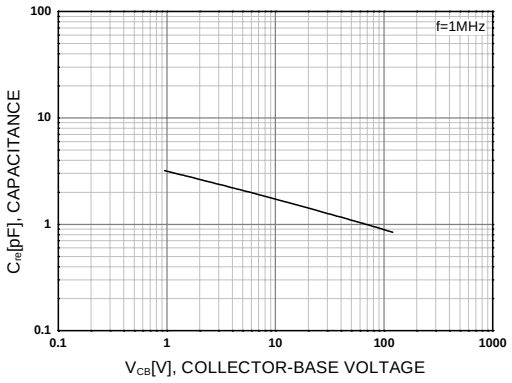


Figure 7. Reverse Transfer Capacitance

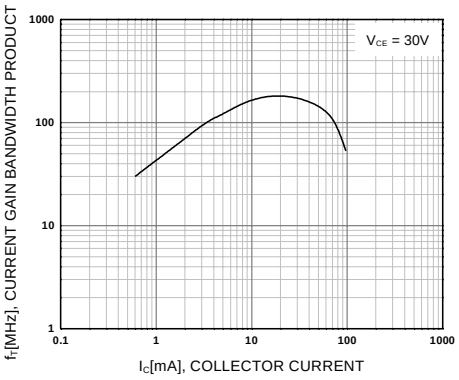


Figure 8. Current Gain Dandwidth Product

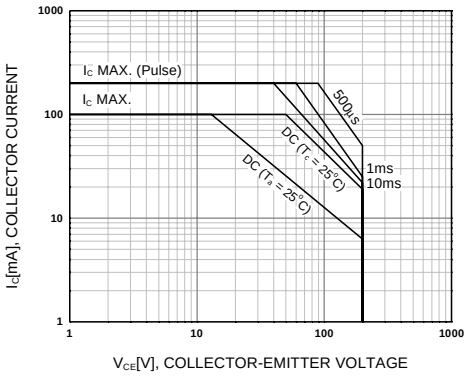


Figure 9. Safe Operating Area

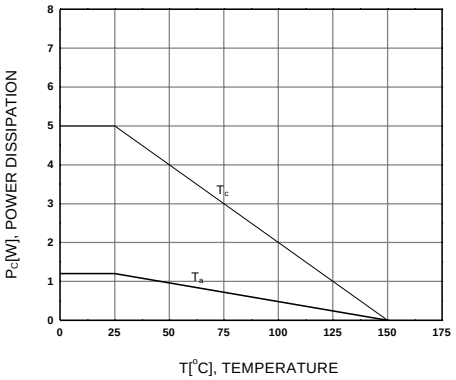


Figure 10. Power Derating

Package Demensions

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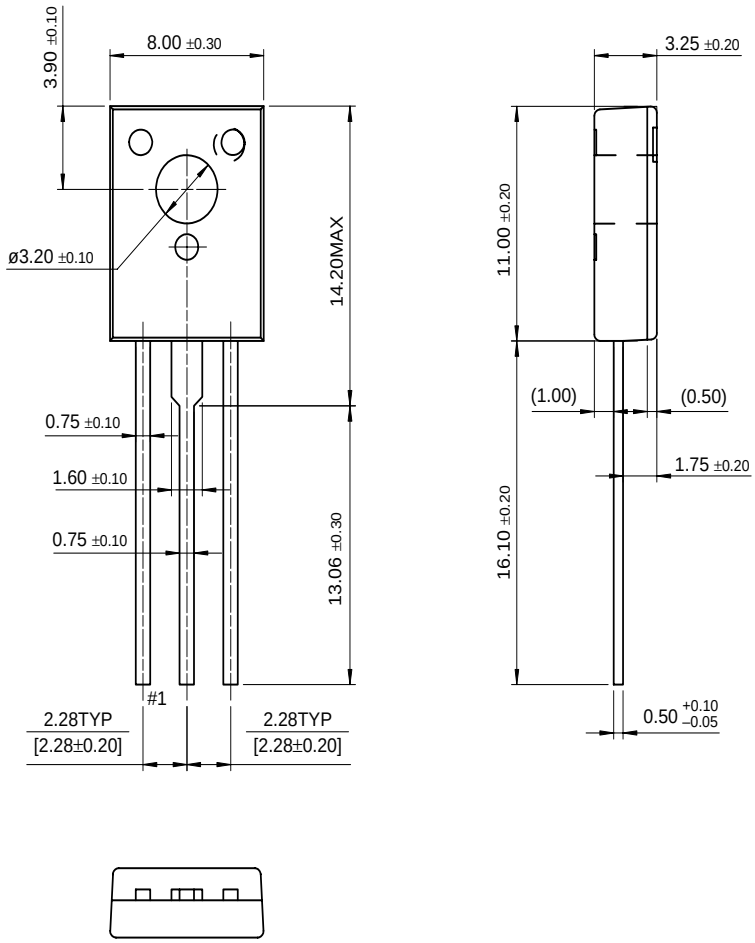

Dimensions in Millimeters

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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