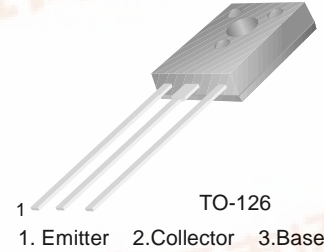


FAIRCHILD
SEMICONDUCTOR™

KSC3503

CRT Display, Video Output

- High Voltage : $V_{CE0}=300V$
- Low Reverse Transfer Capacitance : $C_{re}=1.8pF @ V_{CB}=30V$



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	300	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 ($T_C=25^\circ C$)	7	W
P_C	Collector Dissipation ($T_A=25^\circ C$)	1.2	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 10\mu A, I_E = 0$	300			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 1mA, I_B = 0$	300			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\mu A, I_C = 0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 200V, I_E = 0$			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	$V_{CB} = 30V, f = 1MHz$		2.6		pF
C_{re}	Reverse Transfer Capacitance	$V_{CB} = 30V, f = 1MHz$		1.8		pF

h_{FE} Classification

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



Typical Characteristics

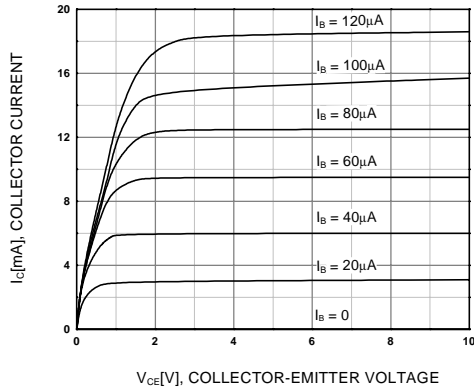


Figure 1. Static Characteristic

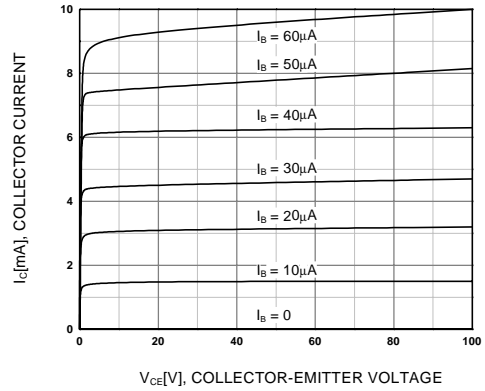


Figure 2. Static Characteristic

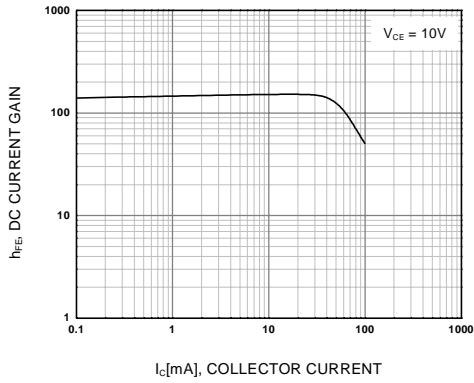


Figure 3. DC current Gain

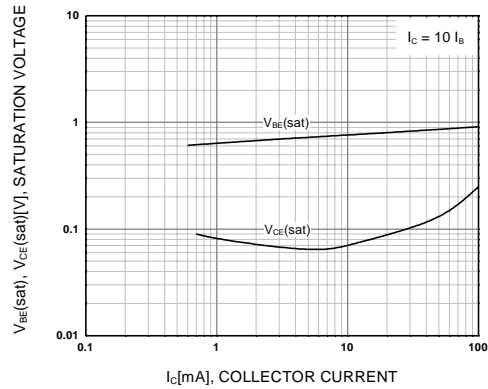


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

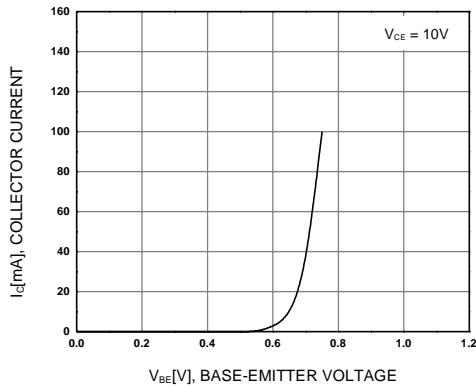


Figure 5. Base-Emitter On Voltage

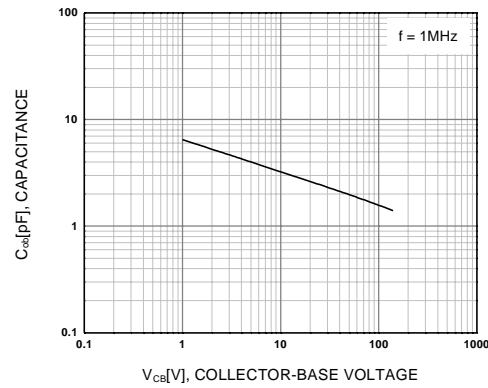


Figure 6. Collector Output Capacitance

Typical Characteristics (Continued)

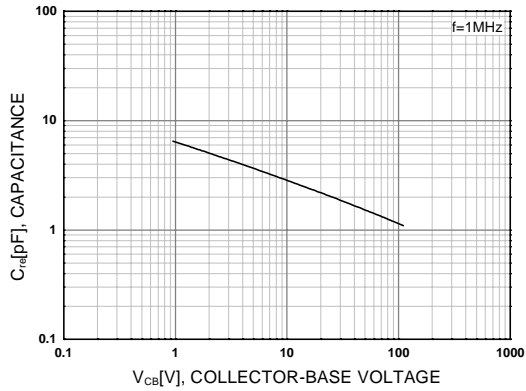


Figure 7. Reverse Transfer Capacitance

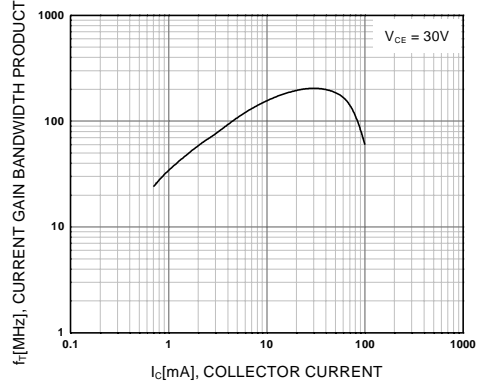


Figure 8. Current Gain Bandwidth Product

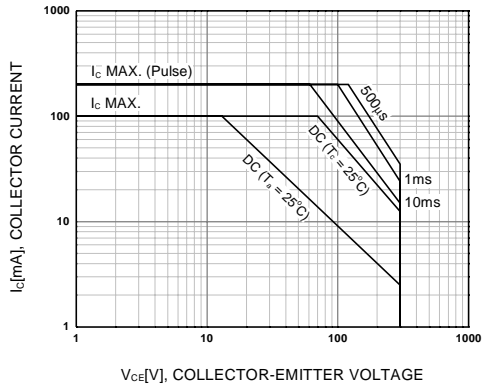


Figure 9. Safe Operating Area

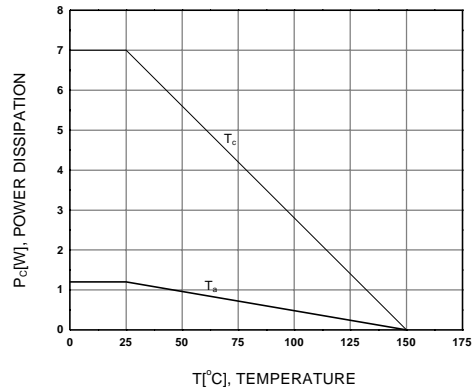
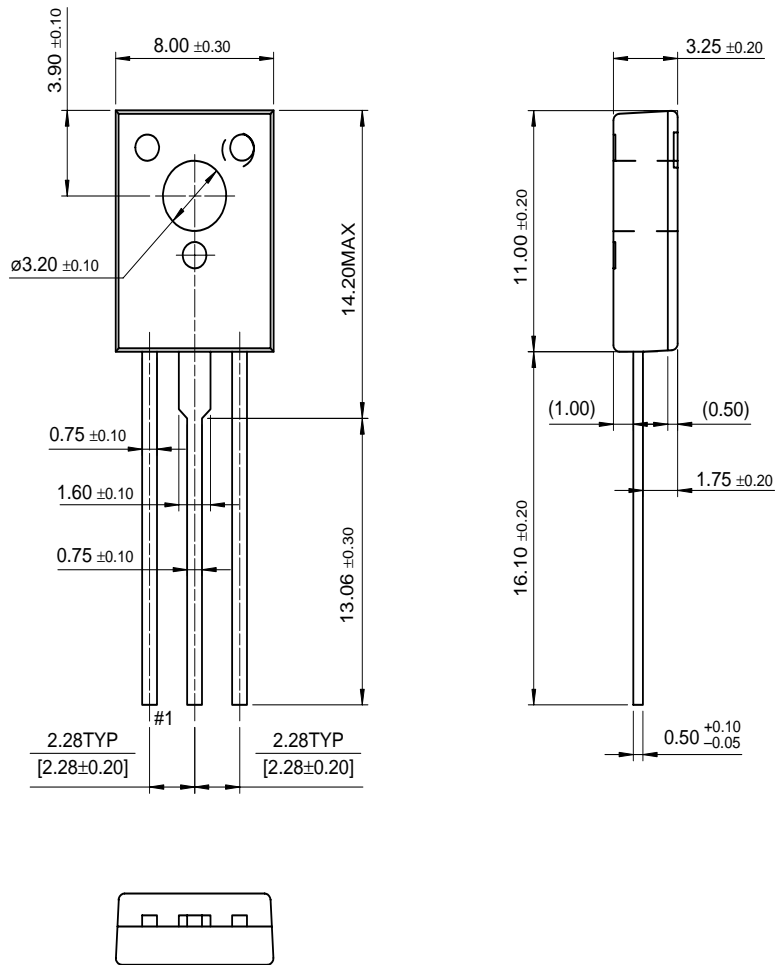


Figure 10. Power Derating

Package Dimensions

KSC3503

TO-126



Dimensions in Millimeters

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FACT™	QFET™	
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