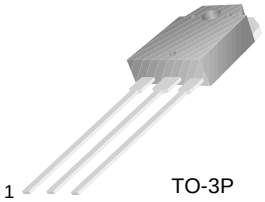
FAIRCHILD
SEMICONDUCTOR®

KSC3552

High Voltage and High Reliabilty

- High Speed Switching
- Wide SOA



1 TO-3P

1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	1100	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current (DC)	12	A
I_{CP}	Collector Current (Pulse)	30	A
I_B	Base Current	6	A
P_C	Collector Dissipation (T_C=25°C)	150	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 = 1mA, I_E = 0	1100			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 5mA, I_B = 0	800			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 1mA, I_C = 0	7			V
V_{CEX}(sus)	Collector-Emitter Sustaining Voltage	I_C = 6A, I_{B1} = -I_{B2} = 1.2A L = 500μH, Clamped	800			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 800V, I_E = 0			10	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0			10	μA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = 5V, I_C = 0.8A V_{CE} = 5V, I_C = 4A	10 8		40	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 6A, I_B = 1.2A			2	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 6A, I_B = 1.2A			1.5	V
C_{ob}	Output Capacitance	V_{CB} = 10V, f = 1MHz		215		pF
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 0.8A		15		MHz
t_{ON}	Turn ON Time	V_{CC} = 400V 51_{B1} = -2.5I_{B2} = I_C = 8A R_L = 50Ω			0.5	μs
t_{STG}	Storage Time				3	μs
t_F	Fall Time				0.3	μs

h_{FE} Classificntion

Classification	N	R	O
h_{FE}	10 ~ 20	15 ~ 30	20 ~ 40

Typical Characteristics

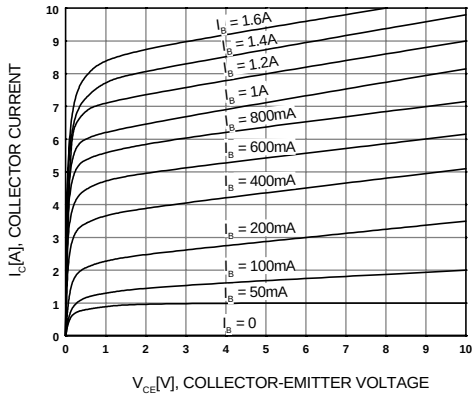


Figure 1. Static Characteristic

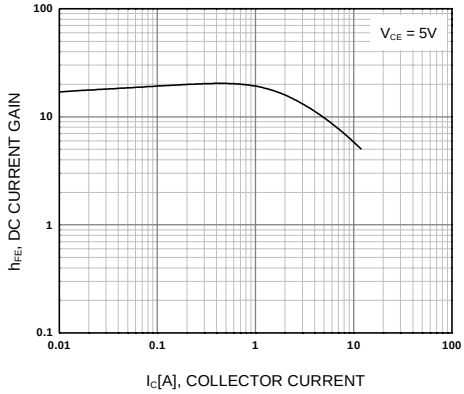


Figure 2. DC current Gain

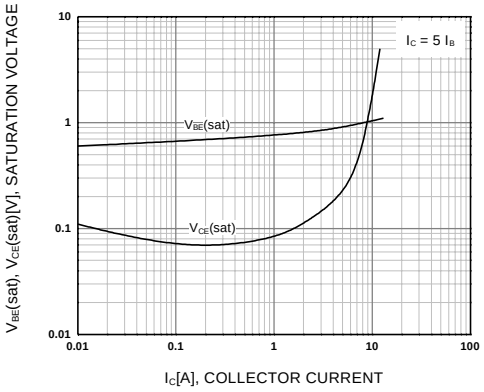


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

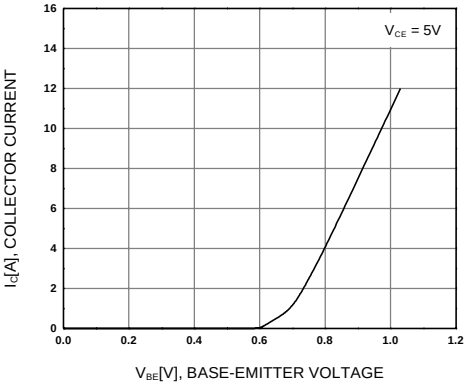


Figure 4. Base-Emitter on Voltage

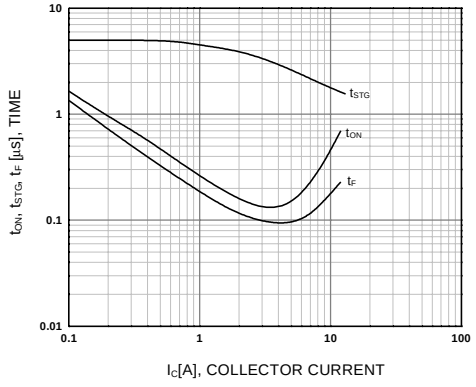


Figure 5. Turn On Time

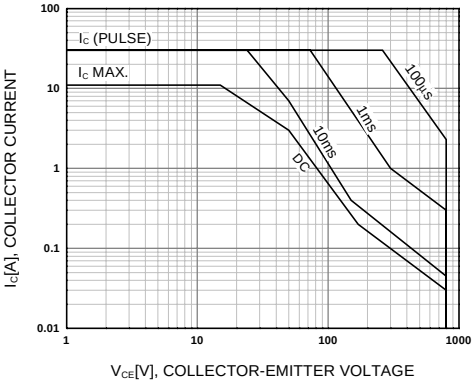


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

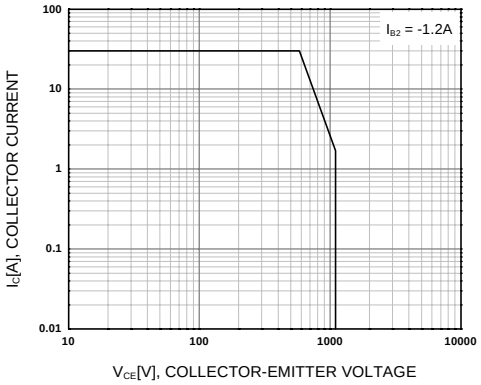


Figure 7. Reverse Bias Safe Operating Area

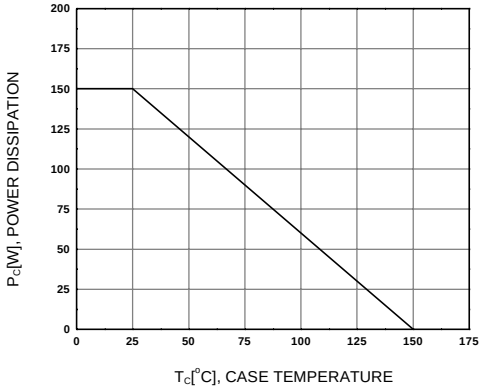
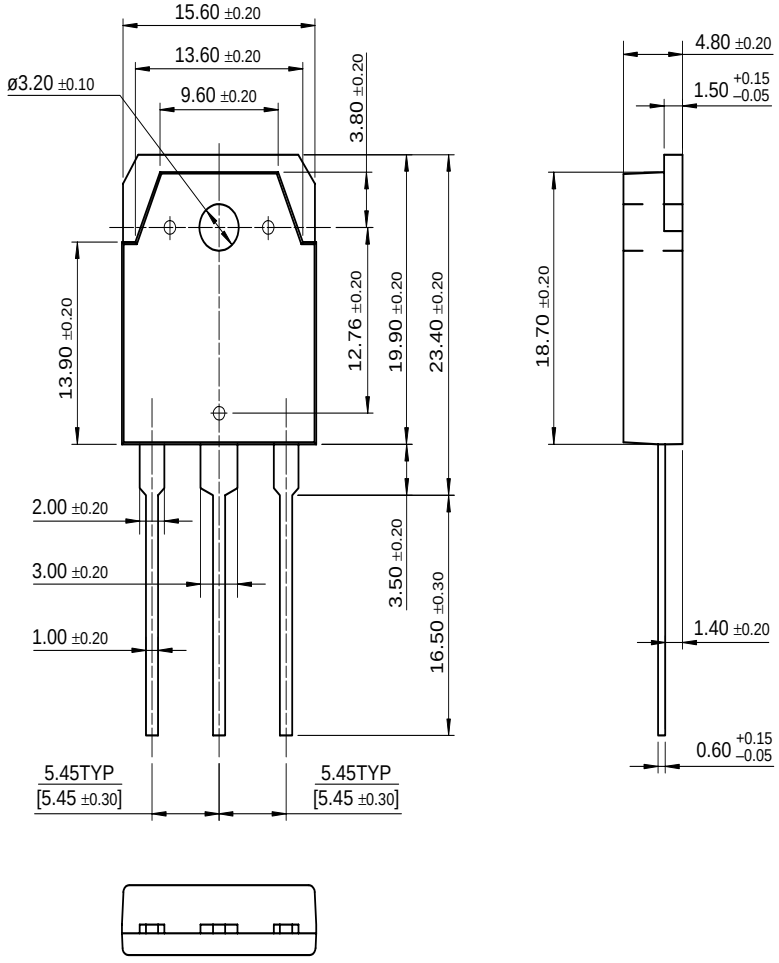


Figure 8. Power Derating

Package Demensions

TO-3P



Dimensions in Millimeters

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