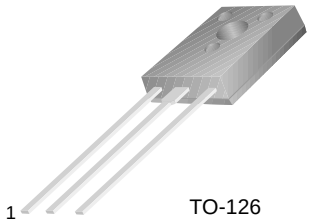
FAIRCHILD SEMICONDUCTOR™

KSA1156

High Voltage Switching
Low Power Switching Regulator
DC-DC Converter

- High Breakdown Voltage
- Low Collector Saturation Voltage
- High Speed Switching



TO-126

1. Emitter 2.Collector 3.Base

PNP Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	- 400	V
V_{CEO}	Collector-Emitter Voltage	- 400	V
V_{EBO}	Emitter-Base Voltage	- 7	V
I_B	Base Current	- 0.25	A
I_C	Collector Current (DC)	- 0.5	A
I_{CP}	Collector Current (Pulse)	- 1	A
P_C	Collector Dissipation (T_a=25°C)	1	W
P_C	Collector Dissipation (T_C=25°C)	10	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.	Max.	Units
V_{CEO}(sus)	Collector-Emitter Sustaining Voltage	I_C = - 100mA, I_B = - 10mA L = - 20mH	- 400		V
V_{CEX}(sus)	Collector-Emitter Sustaining Voltage	I_C = - 200mA, I_{B1} = - I_{B2} = - 20mA V_{BE}(off)= 5V, L = 10mH	- 400		V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 400V, I_E = 0		- 100	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 5V, I_C = 0		- 10	µA
I_{CEX1}	Collector Cut-off Current	V_{CE} = - 400V, V_{BE}(off) = 1.5V		- 100	µA
I_{CEX2}	Collector Cut-off Current	V_{CE} = - 400V, V_{BE}(off) = 1.5V T_C= 125°C		- 1	mA
h_{FE}	DC Current Gain	V_{CE} = - 5V, I_C = - 100mA	30	200	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = - 100mA, I_B = - 10mA		- 1	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = - 100mA, I_B = - 10mA		- 1.2	V
t_{ON}	Turn On Time	V_{CC} = - 150V, I_C = - 100mA I_{B1}= - 10mA , I_{B2} = 20mA R_L = 1.5KΩ		1	µs
t_{STG}	Storage Time			4	µs
t_F	Fall Time			1	µs

h_{FE} Classification

Classification	N	R	O	Y
h_{FE}	30 ~ 60	40 ~ 80	60 ~ 120	100 ~ 200

Typical Characteristics

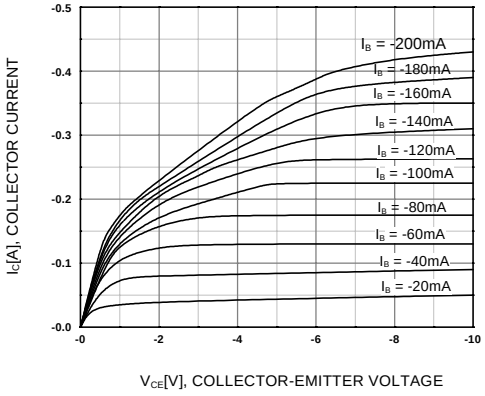


Figure 1. Static Characteristic

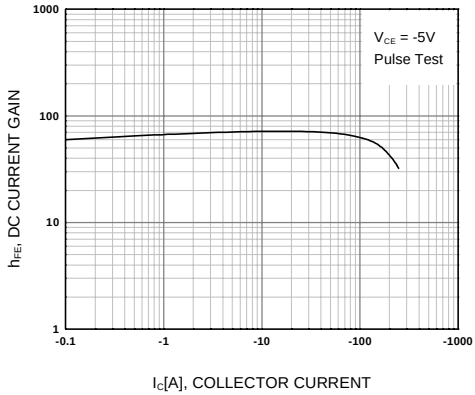


Figure 2. DC current Gain

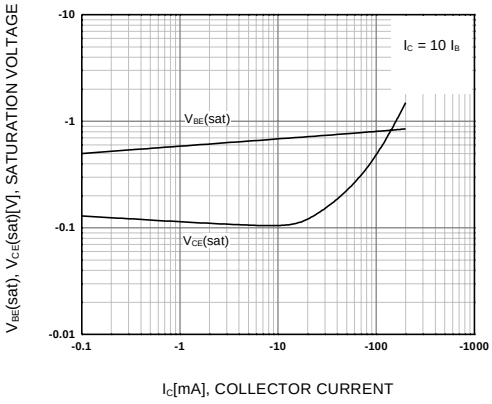


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

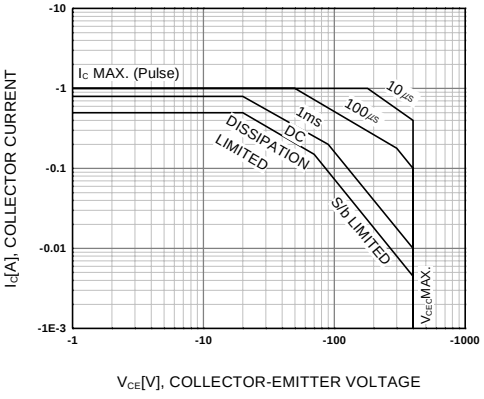


Figure 4. Safe Operating Area

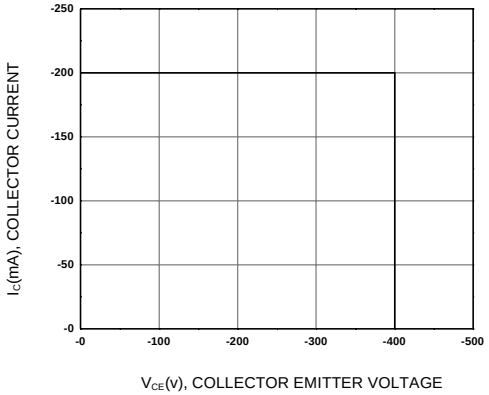


Figure 5. Reverse Bias Safe Operating Area

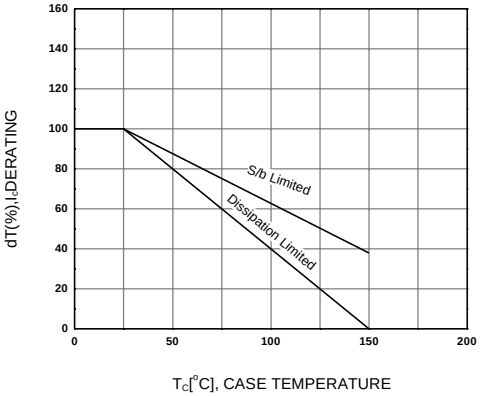


Figure 6. Derating Curve of Safe Operating Areas

Typical characteristics (Continued)

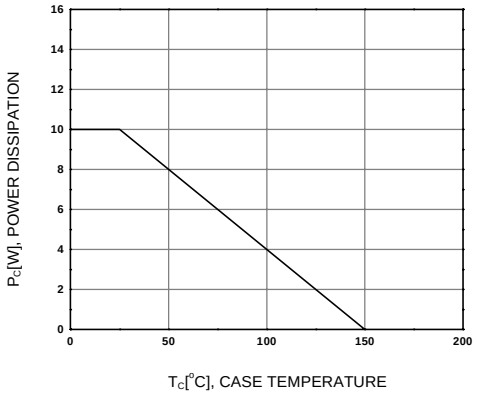
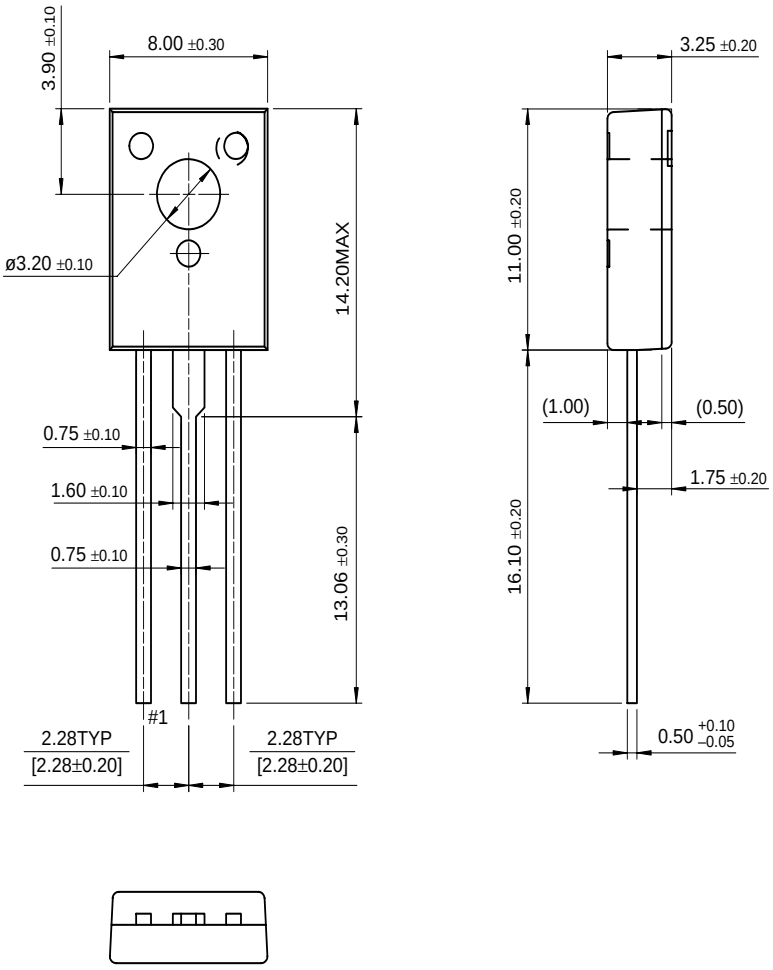


Figure 7. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

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