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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD
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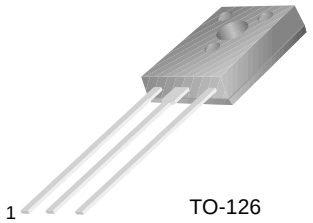
KSB1151

Feature

- Low Collector-Emitter Saturation Voltage
- Large Collector Current
- High Power Dissipation : P_C=1.3W (T_a=25°C)
- Complement to KSD 1691



TO-126

1. Emitter 2.Collector 3.Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 60	V
V_{CEO}	Collector-Emitter Voltage	- 60	V
V_{EBO}	Emitter-Base Voltage	- 7	V
I_C	Collector Current (DC)	- 5	A
I_{CP}	*Collector Current (Pulse)	- 8	A
I_B	Base Current	- 1	A
P_C	Collector Dissipation (T_a=25°C)	1.3	W
	Collector Dissipation (T_C=25°C)	20	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

* PW≤10ms, Duty Cycle≤50%

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB} = - 50V, I_E = 0			- 10	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 7V, I_C = 0			- 10	μA
h_{FE1} h_{FE2} h_{FE3}	* DC Current Gain	V_{CE} = - 1V, I_C = - 0.1A V_{CE} = - 1V, I_C = - 2A V_{CE} = - 2V, I_C = - 5A	60 100 50	200	400	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = - 2A, I_B = - 0.2A		- 0.14	- 0.3	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = - 2A, I_B = - 0.2A		- 0.9	- 1.2	V
t_{ON}	Turn On Time	V_{CC} = - 10V, I_C = - 2A I_{B1} = - I_{B2} =0.2A RL = 5Ω		0.15	1	μs
t_{STG}	Storage Time			0.78	2.5	μs
t_F	Fall Time			0.18	1	μs

* Pulse test: PW≤350μs, Duty Cycle≤2% Pulsed

h_{FE} Classification

Classification	O	Y	G
h_{FE2}	100 ~ 200	160 ~ 320	200 ~ 400

Typical Characteristics

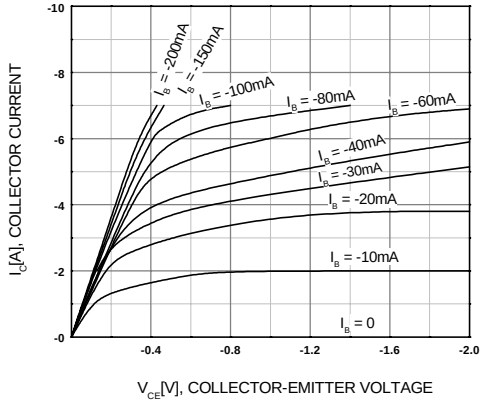


Figure 1. Static Characteristic

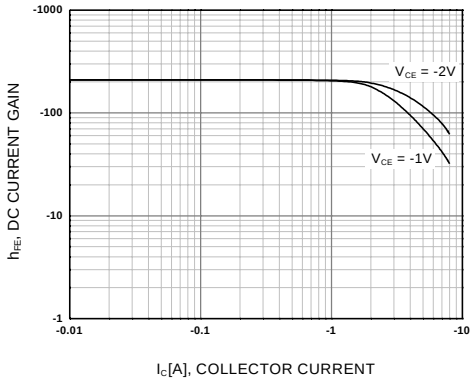


Figure 2. DC current Gain

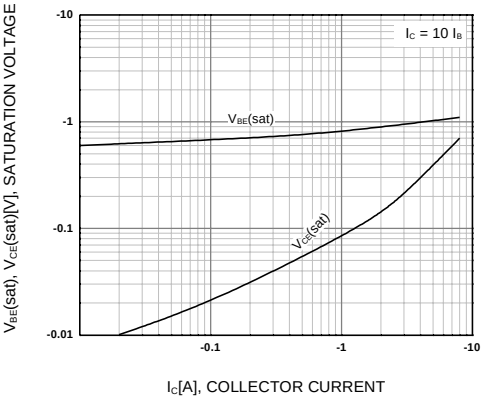


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

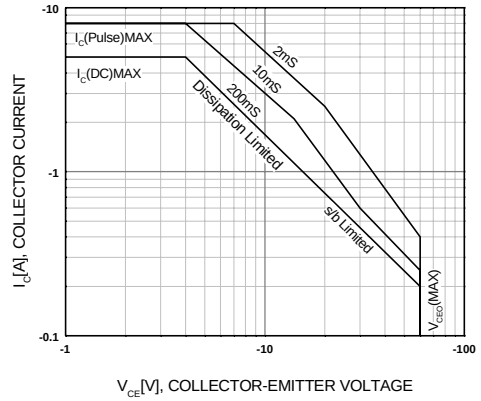


Figure 4. Forward Bias Operating Area

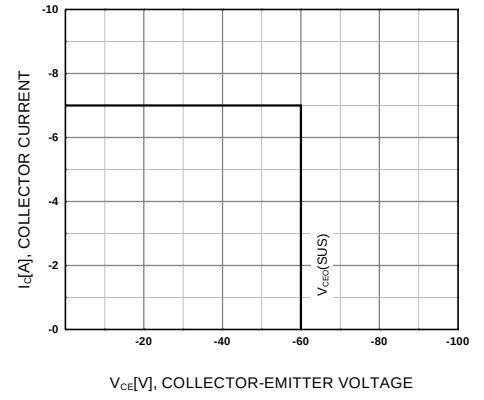


Figure 5. Reverse Bias Safe Operating Area

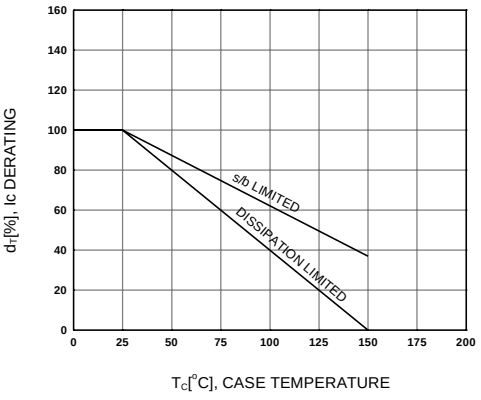


Figure 6. Derating Curve of Safe Operating Areas

Typical Characteristics (Continued)

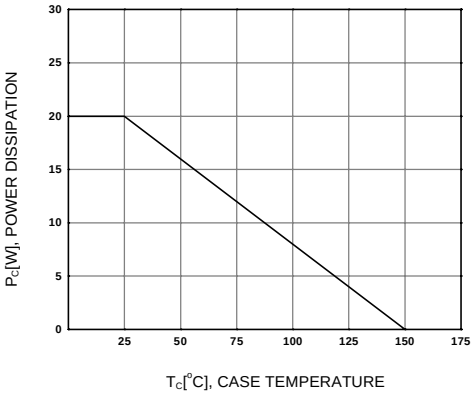
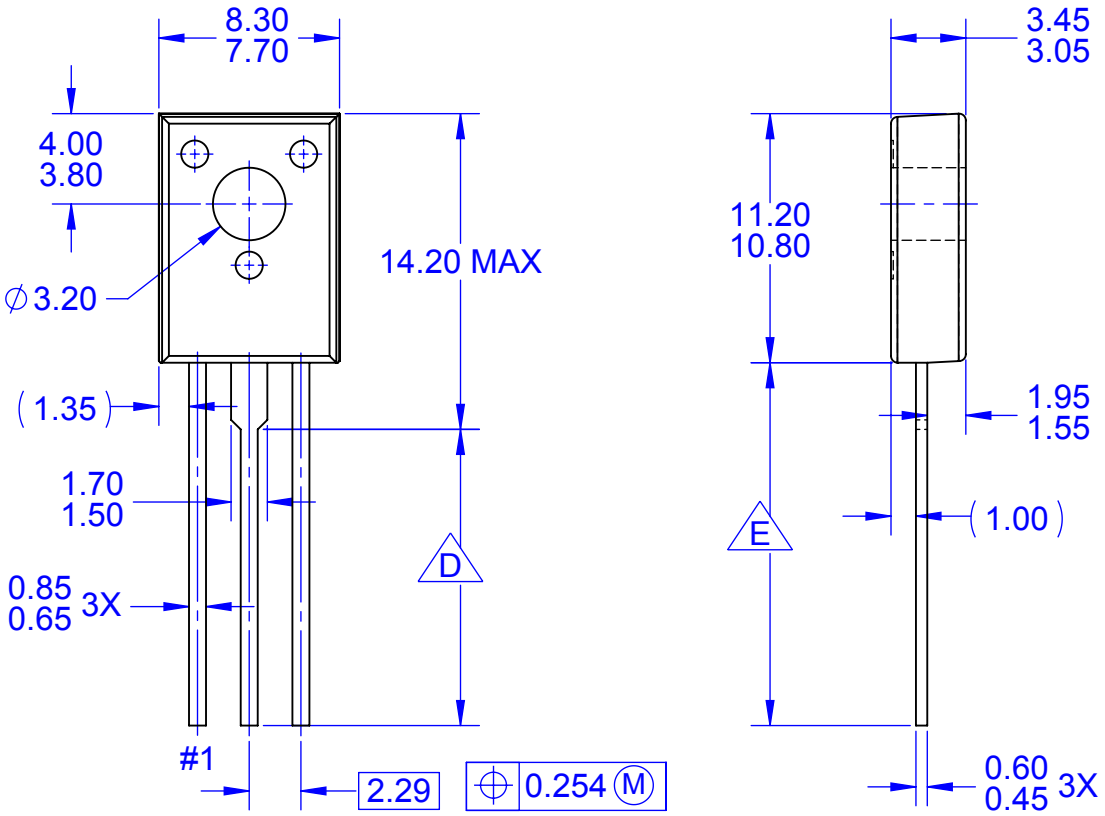
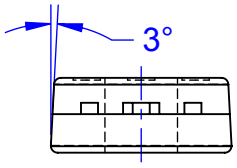


Figure 7. Power Derating



TOP VIEW

SIDE VIEW



FRONT VIEW

PRODUCTION CODE	TERMINAL LENGTH "D"	TERMINAL LENGTH "E"
TSSTU	3.45 - 4.05	6.45-7.45
TSTU	2.36 - 2.96	5.36-6.36
NONE (STD LENGTH)	12.76 - 13.36	15.76-16.76

NOTES:

A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
B. ALL DIMENSIONS ARE IN MILLIMETERS
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

△D FOR TERMINAL LENGTH "D", REFER TO TABLE

△E FOR TERMINAL LENGTH "E", REFER TO TABLE

F. DRAWING FILENAME: MKT-TO126AArev2

FAIRCHILD ™

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