

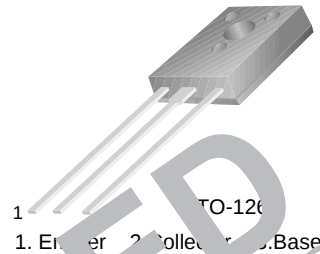


KSB1151

KSB1151

Feature

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



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ 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 (Pulsed)	-3	A
I_B	Base Current	-1	A
P_C	Collector Dissipation ($T_a=25^\circ C$)	1.3	W
	Collector Dissipation ($T_C=25^\circ C$)	20	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ C$

* $PW \leq 10ms$, Duty Cycle $\leq 2\%$

Electrical Characteristics $T_C=25^\circ C$ 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}	* DC Current Gain	$V_{CE} = -1V, I_C = -0.1A$	60	200	400	
h_{FE2}		$V_{CE} = -1V, I_C = -2A$	100			
h_{FE3}		$V_{CE} = -2V, I_C = -5A$	50			
$V_{CE(sat)}$	* 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	$V_{CC} = -10V, I_C = -2A$ $I_{B1} = -I_{B2} = 0.2A$ $RL = 5\Omega$		0.15	1	μs
t_{STG}	Storage Time			0.78	2.5	μs
t_F	Fall Time			0.18	1	μs

* Pulse test: $PW \leq 350\mu s$, Duty Cycle $\leq 2\%$ Pulsed

h_{FE} Classification

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

Typical Characteristics

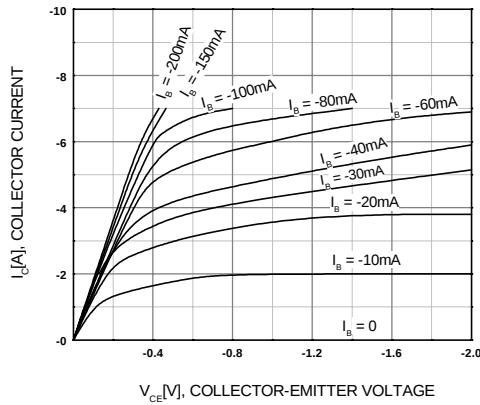


Figure 1. Static Characteristic

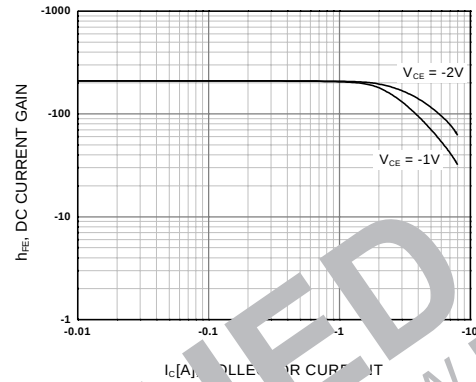


Figure 2. DC Current Gain

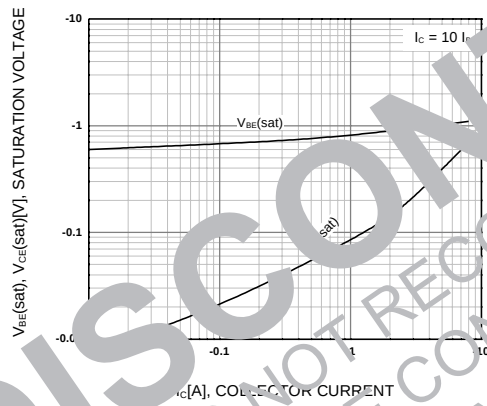


Figure 3. Collector-Emitter Saturation Voltage

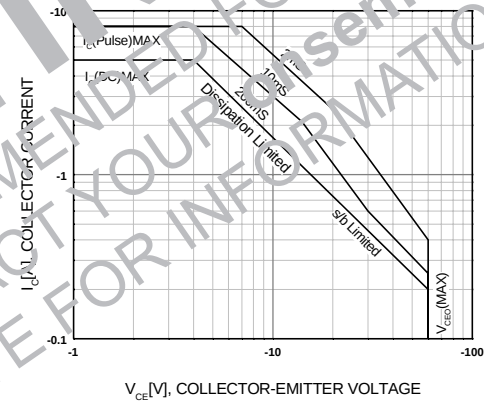


Figure 4. Forward Bias Operating Area

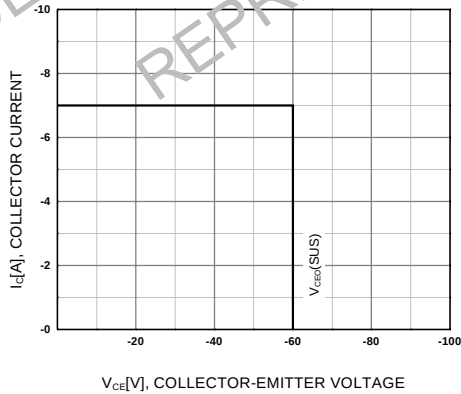


Figure 5. Reverse Bias Safe Operating Area

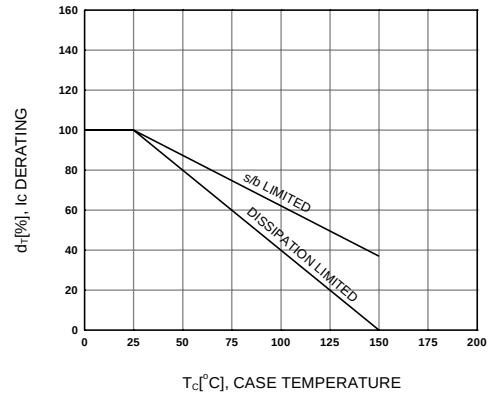
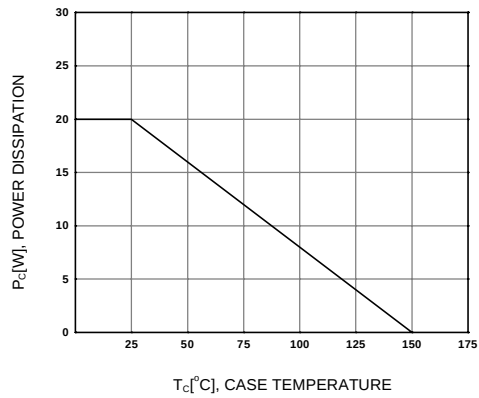
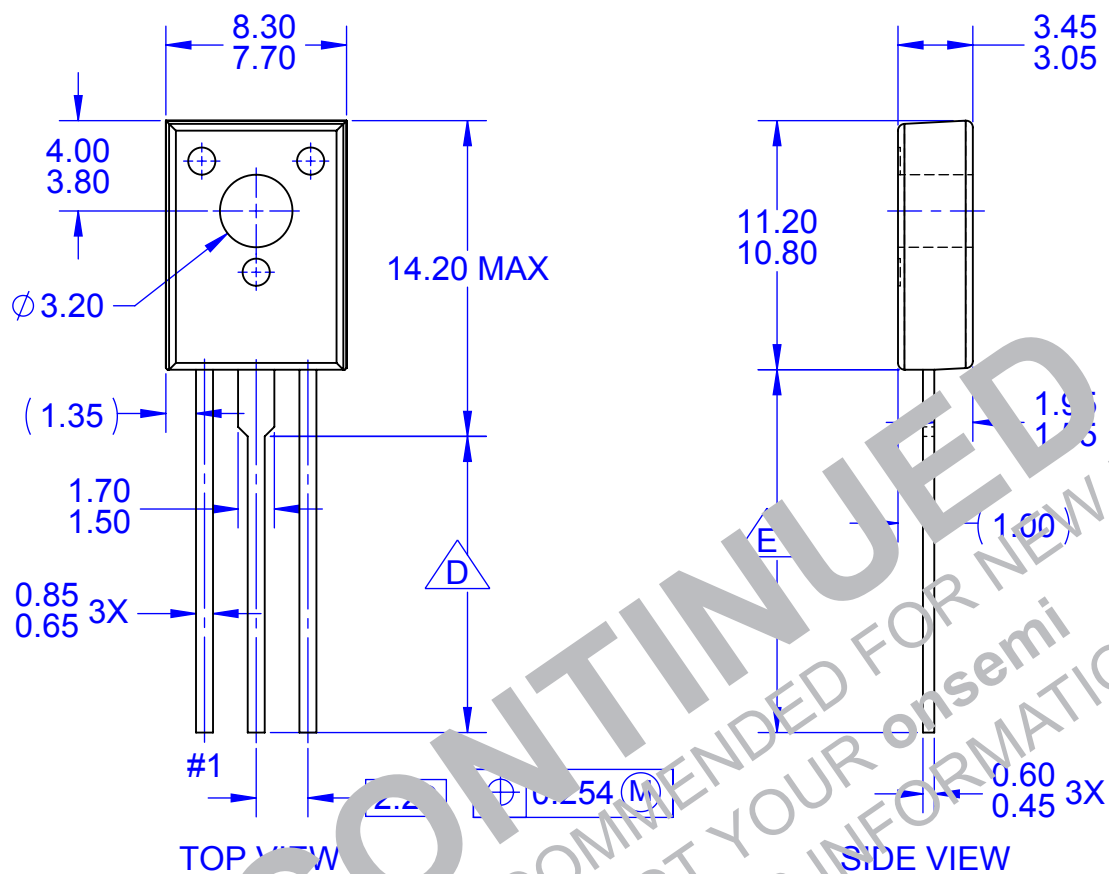


Figure 6. Derating Curve of Safe Operating Areas

Typical Characteristics (Continued)**Figure 7. Power Derating**



NOTES:

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

$\triangle D$ FOR TERMINAL LENGTH "D", REFER TO TABLE

$\triangle E$ FOR TERMINAL LENGTH "E", REFER TO TABLE
F. DRAWING FILENAME: MKT-TO126AArev2

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



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