



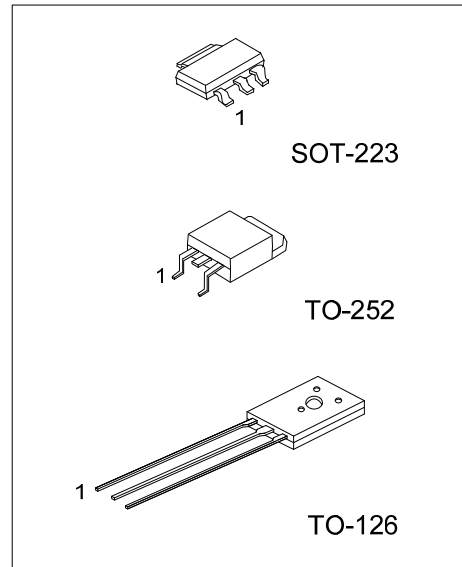
2SB1151

PNP SILICON TRANSISTOR

LOW COLLECTOR
SATURATION VOLTAGE
LARGE CURRENT

■ FEATURES

- *High Power Dissipation
- *Complementary to 2SD1691



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1151L-x-AA3-R	2SB1151G-x-AA3-R	SOT-223	E	C	B	Tape Reel
2SB1151L-x-T60-K	2SB1151G-x-T60-K	TO-126	E	C	B	Bulk
2SB1151L-x-TN3-R	2SB1151G-x-TN3-R	TO-252	B	C	E	Tape Reel

<p>2SB1151L-x-AA3-R</p>	<p>(1) K: Bulk, R: Tape Reel</p> <p>(2) AA3: SOT-223, T60: TO-126, TN3: TO-252</p> <p>(3) x: refer to Classification of h_{FE2}</p> <p>(4) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-60	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-5	A
	Pulse(Note 2)	I_{CP}	-8	A
Base Current		I_B	-1	A
Power Dissipation (Ta=25°C)	SOT-223	P_D	1	W
	TO-126		1.5	W
	TO-252		2	W
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Note 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. $PW \leq 10ms$, Duty Cycle $\leq 50\%$

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Voltage		BV_{CBO}	$I_C = -100\mu A, I_E = 0$	-60			V
Collector-Emitter Voltage		BV_{CEO}	$I_C = -1mA, I_B = 0$	-60			V
Emitter-Base Voltage		BV_{EBO}	$I_E = -100\mu A, I_C = 0$	-7			V
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V, I_E = 0$			-10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -7V, I_C = 0$			-10	μA
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	$I_C = -2A, I_B = -0.2A$		-0.14	-0.3	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	$I_C = -2A, I_B = -0.2A$		-0.9	-1.2	V
DC Current Gain		h_{FE1}	$V_{CE} = -1V, I_C = 0.1A$	60			
		h_{FE2}	$V_{CE} = -1V, I_C = -2A$	160		400	
		h_{FE3}	$V_{CE} = -2V, I_C = -5A$	50			
Switching Time	Turn On Time	t_{ON}			0.15	1	μS
	Storage Time	t_{STG}			0.78	2.5	μS
	Fall Time	t_F			0.18	1	μS

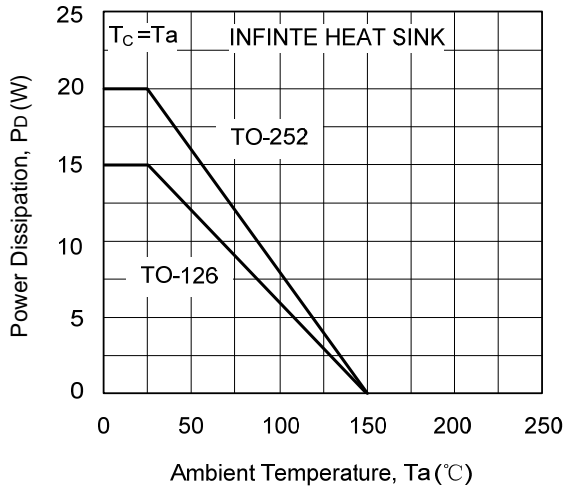
Pulse test : $PW \leq 350 \mu S$, Duty Cycle $\leq 2\%$ Pulse

■ CLASSIFICATION OF h_{FE2}

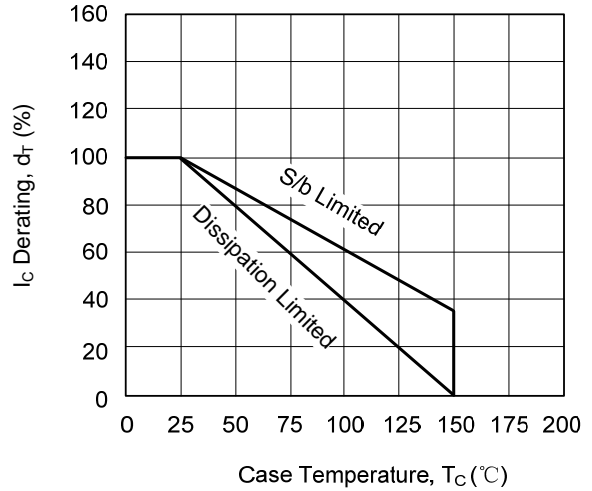
RANK	O	Y
RANGE	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS

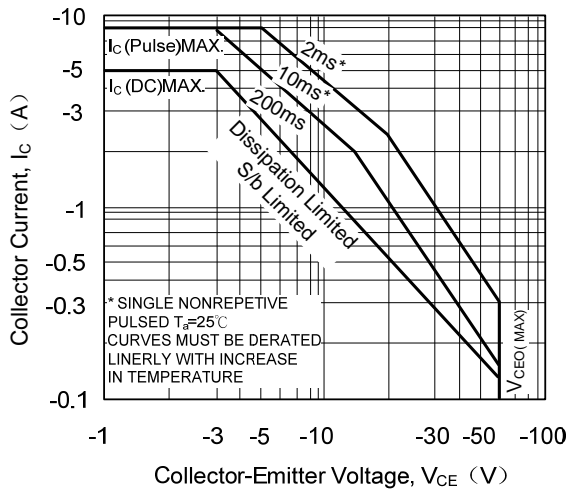
Power Dissipation vs. Ambient Temperature



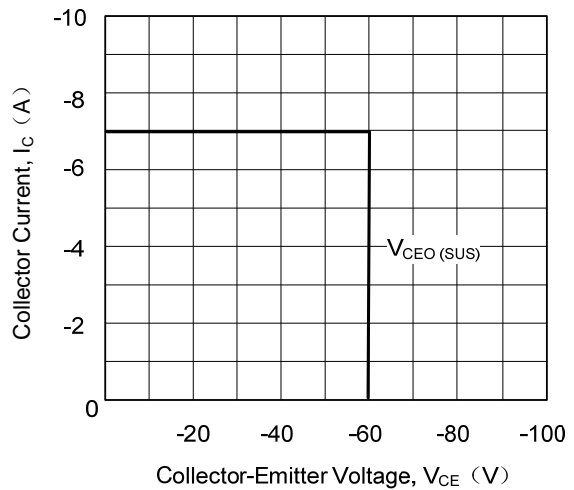
I_c Derating vs. Case Temperature



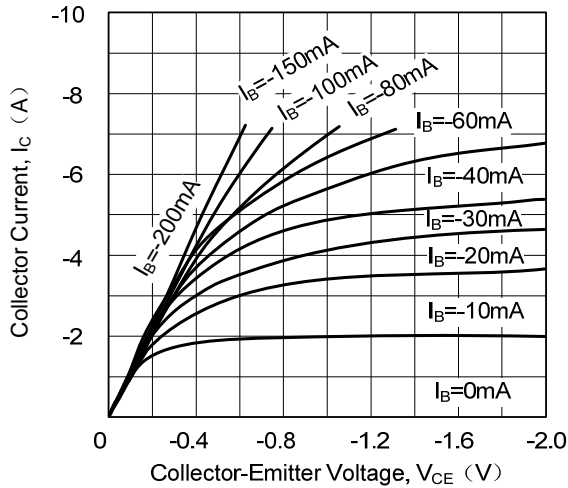
Safe Operating Area



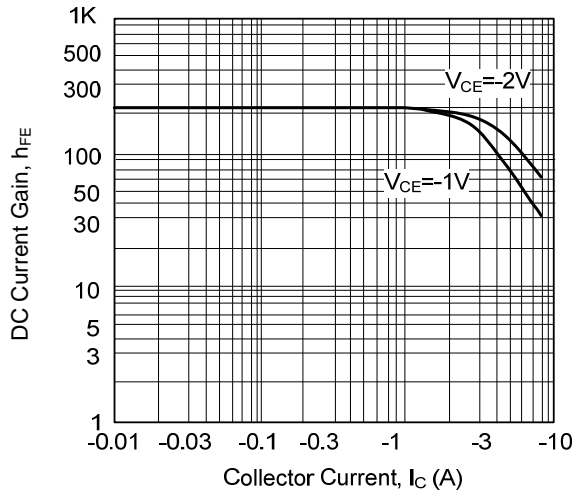
Reverse Bias Safe Operating Area



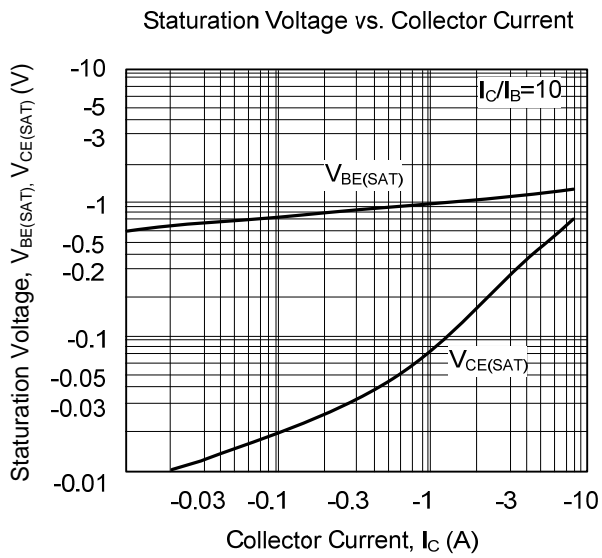
Collector Current vs. Collector-Emitter Voltage



DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS



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