



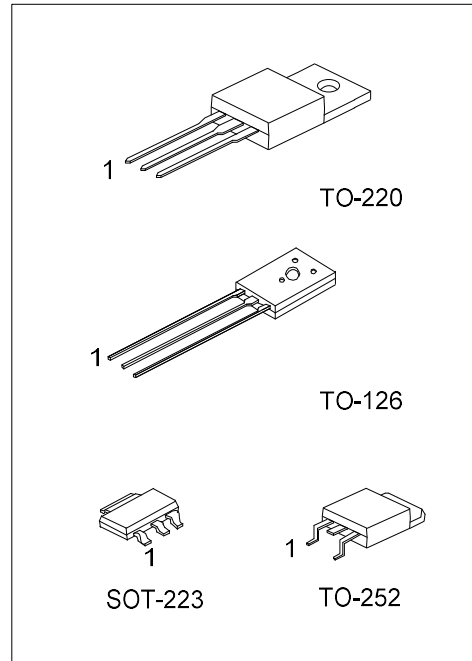
2SB1151

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-TA3-T	2SB1151G-x-TA3-T	TO-220	B	C	E	Tube
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

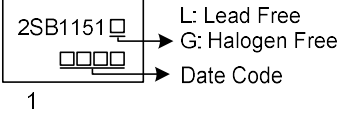
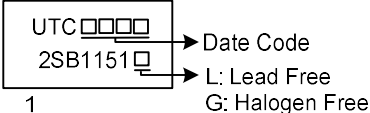
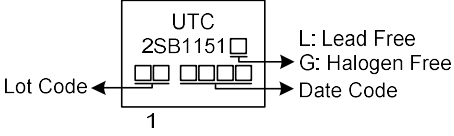
Note: Pin Assignment: E: Emitter C: Collector B: Base

<p>2SB1151G-x-AA3-R</p>	<p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) R: Tape Reel, T: Tube, K: Bulk (2) AA3: SOT-223, TA3: TO-220, TN3: TO-252 T60: TO-126 (3) x: refer to Classification of h_{FE2} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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2SB1151

PNP SILICON TRANSISTOR

MARKING

PACKAGE	MARKING
SOT-223	 <p>L: Lead Free G: Halogen Free Date Code</p> <p>1</p>
TO-126	 <p>Date Code L: Lead Free G: Halogen Free</p> <p>1</p>
TO-220 / TO-252	 <p>Lot Code Date Code L: Lead Free G: Halogen Free</p> <p>1</p>

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

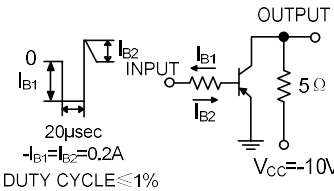
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CB0}	-60	V
Collector-Emitter Voltage		V _{CEO}	-60	V
Emitter-Base Voltage		V _{EBO}	-7	V
Collector Current	DC	I _C	-5	A
	Pulse(Note2)	I _{CP}	-8	A
Base Current		I _B	-1	A
Power Dissipation (T _A =25°C)	SOT-223	P _D	1	W
	TO-220		2	W
	TO-126		1.3	W
	TO-252			
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. P_W ≤ 10ms, Duty Cycle ≤ 50%.

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

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Voltage		BV _{CB0}	I _C =-100uA, 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 =-100uA, 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}	 <p>20μsec I_{B1}=I_{B2}=0.2A DUTY CYCLE ≤ 1%</p>	0.15	1	μS	
	Storage Time	t _{STG}		0.78	2.5	μS	
	Fall Time	t _F		0.18	1	μS	

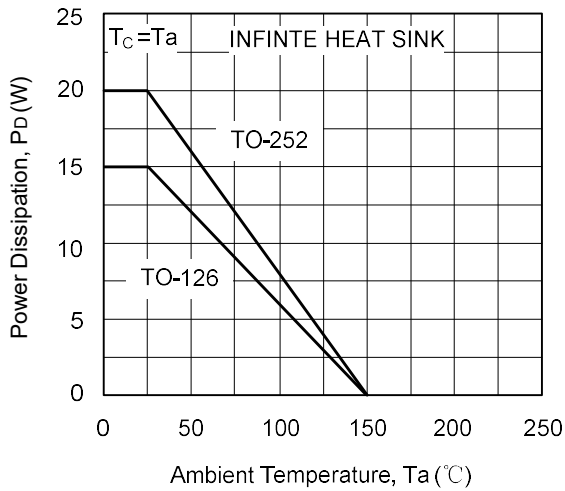
Pulse test : P_W ≤ 350 μS, Duty Cycle ≤ 2% Pulse.

■ CLASSIFICATION OF h_{FE2}

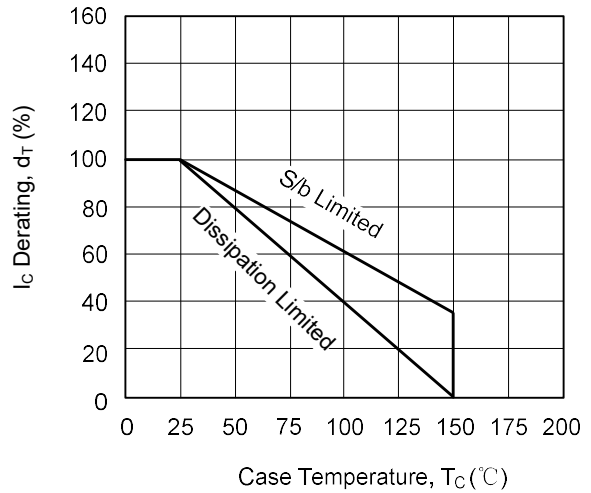
RANK	O	Y
RANGE	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS

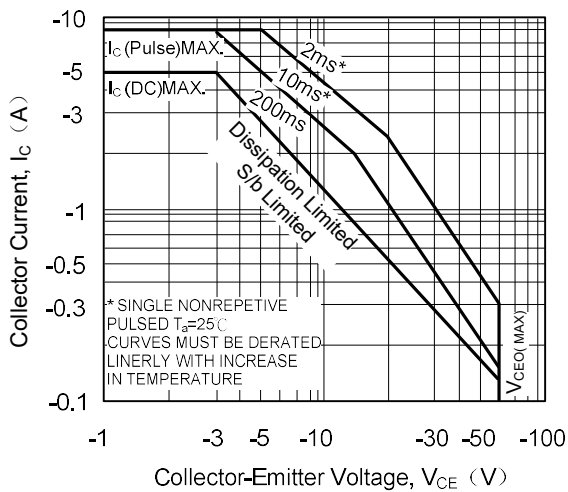
Power Dissipation vs. Ambient Temperature



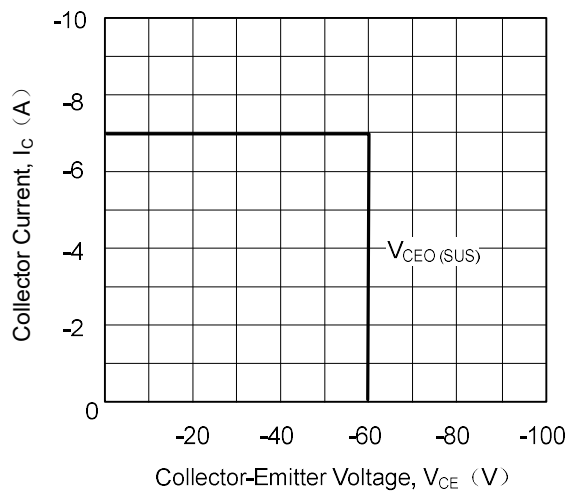
I_C Derating vs. Case Temperature



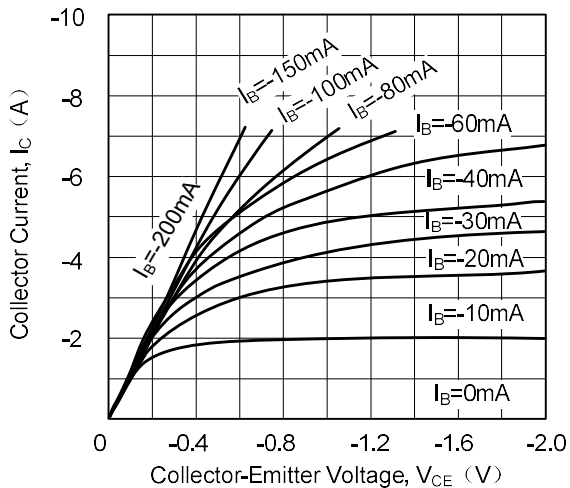
Safe Operating Area



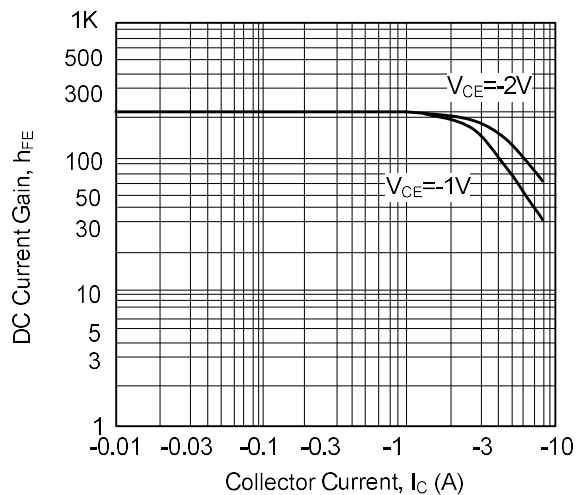
Reverse Bias Safe Operating Area



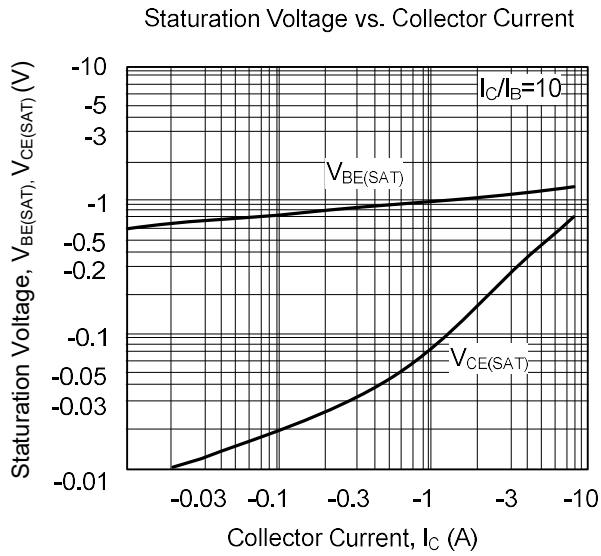
Collector Current vs. Collector-Emitter Voltage



DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS (Cont.)



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