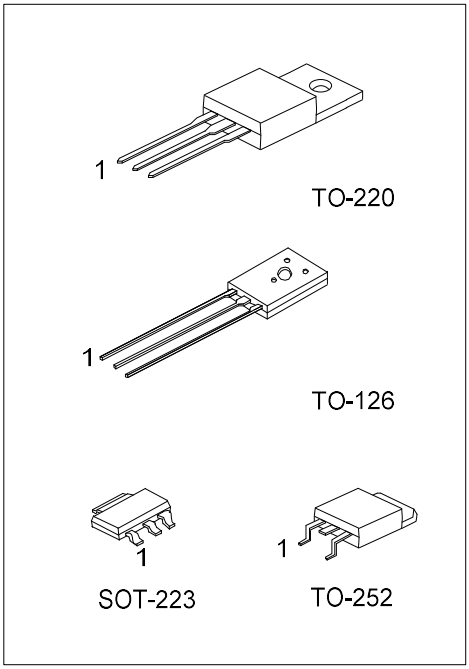
2SB1151

PNP SILICON TRANSISTOR

LOW COLLECTOR SATURATION VOLTAGE LARGE CURRENT



■ FEATURES

*High Power Dissipation
*Complementary to 2SD1691

■ ORDERING INFORMATION

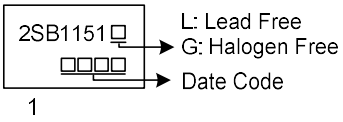
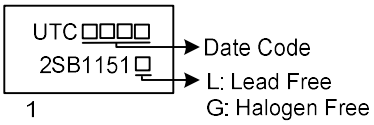
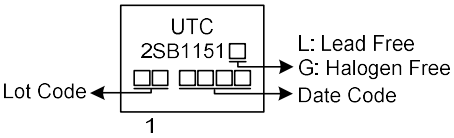
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1151L-x-AA3-R	2SB1151G-x-AA3-R	SOT-223	E	C	B	Tape Reel
2SB1151L-x-TA3-T	2SB1151G-x-TA3-T	TO-220	B	C	E	Tube
2SB1151L-x-T60-K	2SB1151G-x-T60-K	TO-126	E	C	B	Bulk
2SB1151L-x-TN3-R	2SB1151G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

2SB1511G-x-AA3-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(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

■ MARKING

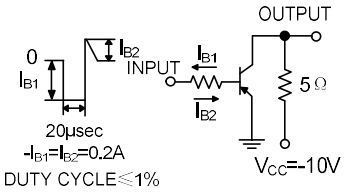
PACKAGE	MARKING
SOT-223	
TO-126	
TO-220 / TO-252	

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

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(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 TO-252		1.3	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.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_{CBO}	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, Ic=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		$h_{FE\ 1}$	V_{CE}=-1V, I_C=-0.1A	60			
		$h_{FE\ 2}$	V_{CE}=-1V, I_C=-2A	160		400	
		$h_{FE\ 3}$	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

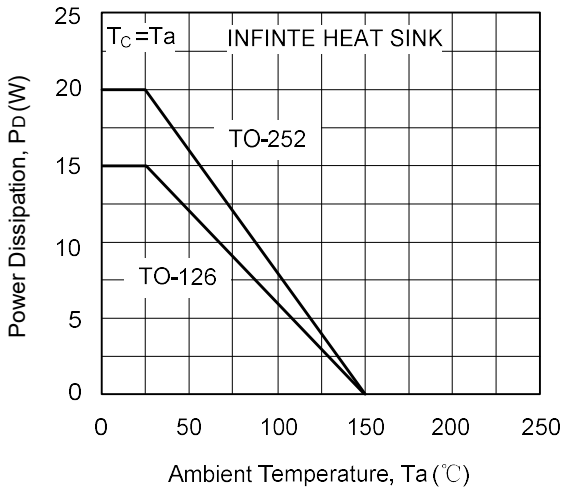
Pulse test : P_W≤350 μS, Duty Cycle≤2% Pulse.

■ CLASSIFICATION OF h_{FE2}

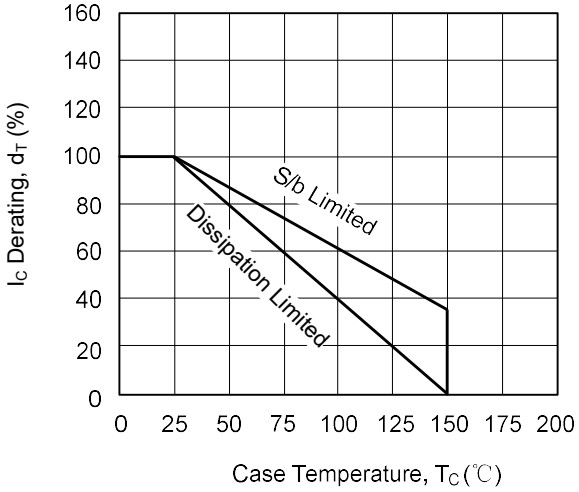
RANK	O	Y
RANGE	160 ~ 320	200 ~ 400

■ TYPICAL CHARACTERISTICS

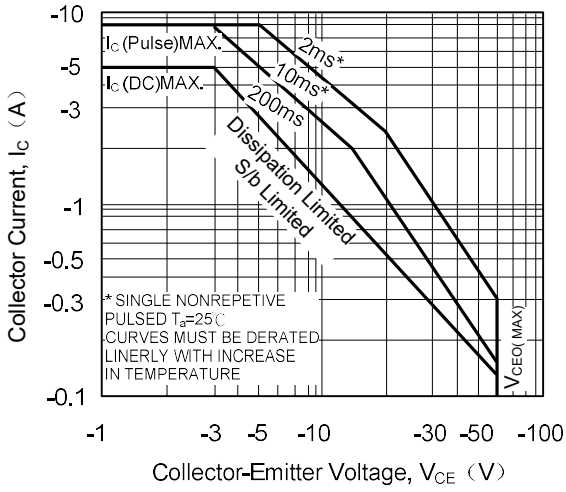
Power Dissipation vs. Ambient Temperature



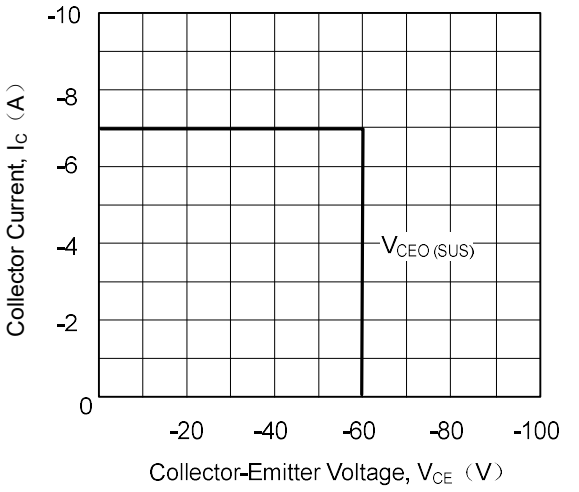
I_C Derating vs. Case Temperature



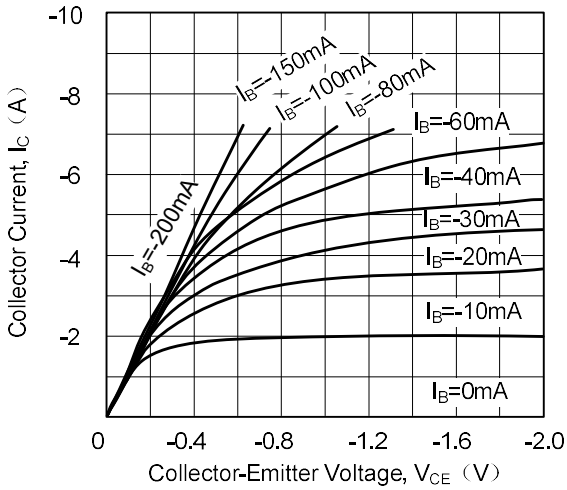
Safe Oerating Area



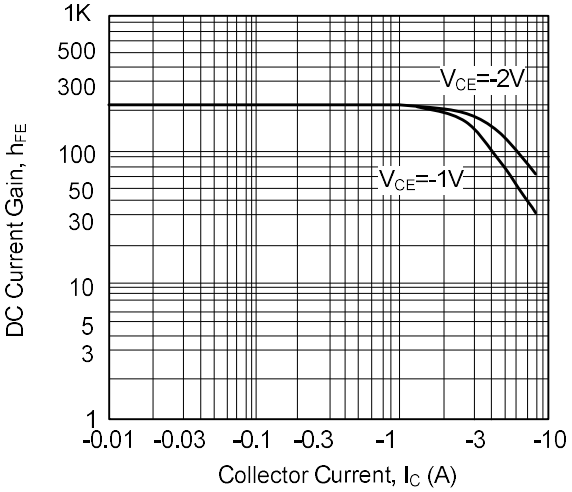
Reverse Bias Safe Operating Area



Collector Current vs. Collector-Emitter Voltage



DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS (Cont.)