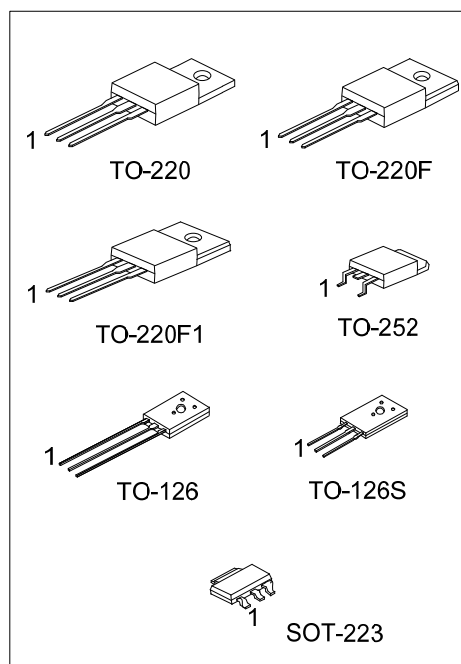


**2SB1151****PNP SILICON TRANSISTOR****LOW COLLECTOR
SATURATION VOLTAGE
LARGE CURRENT****■ FEATURES**

- * 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-TF1-T	2SB1151G-x-TF1-T	TO-220F1	B	C	E	Tube
2SB1151L-x-TF3-T	2SB1151G-x-TF3-T	TO-220F	B	C	E	Tube
2SB1151L-x-T60-K	2SB1151G-x-T60-K	TO-126	E	C	B	Bulk
2SB1151L-x-T60-T	2SB1151G-x-T60-T	TO-126	E	C	B	Tube
2SB1151L-x-T6S-K	2SB1151G-x-T6S-K	TO-126S	E	C	B	Bulk
2SB1151L-x-T6S-T	2SB1151G-x-T6S-T	TO-126S	E	C	B	Tube
2SB1151L-x-TN3-R	2SB1151G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

	(1) Packing Type	(1) R: Tape Reel, T: Tube, K: Bulk
	(2) Package Type	(2) AA3: SOT-223, TA3: TO-220, TF1: TO-220F1 TF3: TO-220F, TN3: TO-252, T60: TO-126 T6S: TO-126S
	(3) Rank	(3) x: refer to Classification of h_{FE2}
	(4) Green Package	(4) G: Halogen Free and Lead Free, L: Lead Free

2SB1151

PNP SILICON TRANSISTOR

MARKING

PACKAGE	MARKING
SOT-223	2SB1151 1 L: Lead Free G: Halogen Free Date Code
TO-126 TO-126S	UTC 2SB1151 1 Date Code L: Lead Free G: Halogen Free
TO-220 / TO-220F TO-220F1 / TO-252	UTC 2SB1151 Lot Code 1 L: Lead Free G: Halogen Free Date Code

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

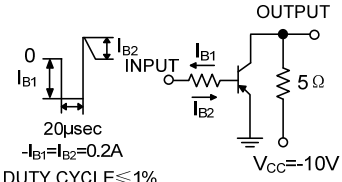
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-60	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-5	A
	Pulse(Note2)	I_{CP}	-8	A
Base Current		I_B	-1	A
Power Dissipation ($T_A=25^\circ\text{C}$)	SOT-223	P_D	1	W
	TO-220/TO-220F		2	W
	TO-220F1			
	TO-126/TO-126S TO-252		1.3	W
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

Notes: 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. $P_W \leq 10\text{ms}$, Duty Cycle $\leq 50\%$.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

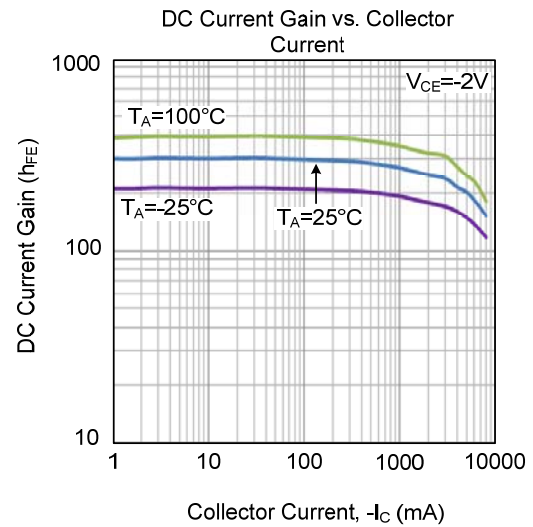
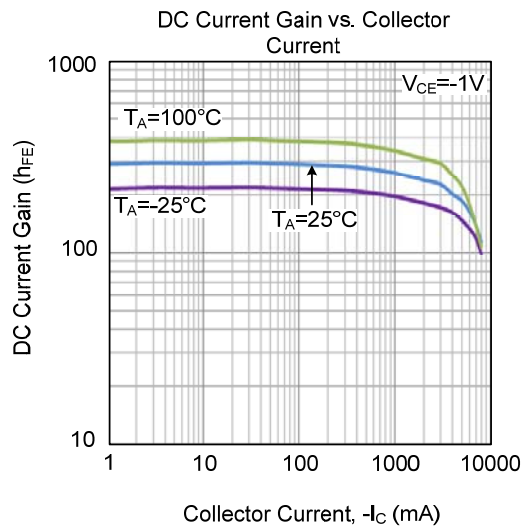
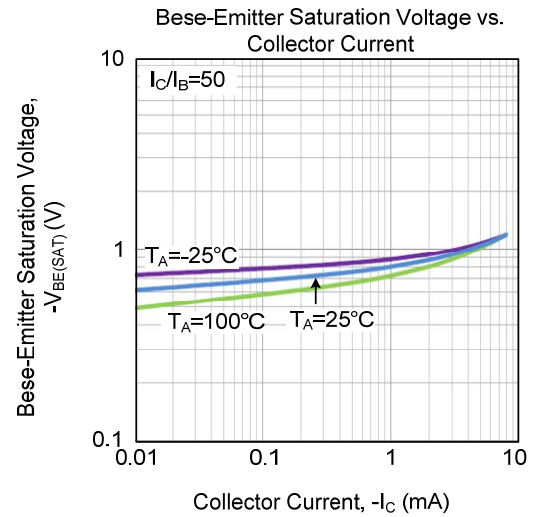
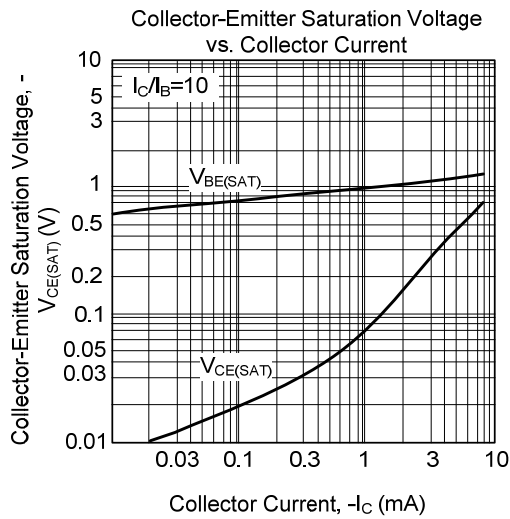
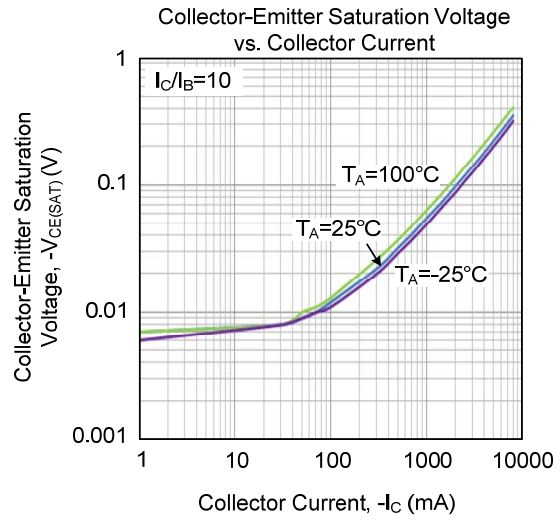
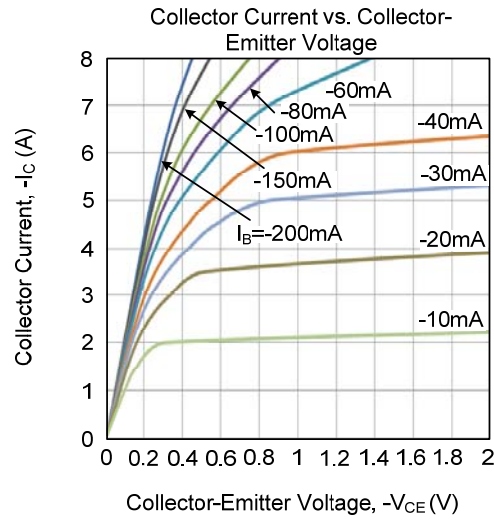
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Voltage		BV_{CBO}	$I_C=-100\mu\text{A}$, $I_E=0$	-60			V
Collector-Emitter Voltage		BV_{CEO}	$I_C=-1\text{mA}$, $I_B=0$	-60			V
Emitter-Base Voltage		BV_{EBO}	$I_E=-100\mu\text{A}$, $I_C=0$	-7			V
Collector Cut-off Current		I_{CBO}	$V_{CB}=-50\text{V}$, $I_E=0$			-10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=-7\text{V}$, $I_C=0$			-10	μA
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	$I_C=-2\text{A}$, $I_B=-0.2\text{A}$		-0.14	-0.3	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	$I_C=-2\text{A}$, $I_B=-0.2\text{A}$		-0.9	-1.2	V
DC Current Gain		h_{FE1}	$V_{CE}=-1\text{V}$, $I_C=-0.1\text{A}$	150			
		h_{FE2}	$V_{CE}=-1\text{V}$, $I_C=-2\text{A}$	160		400	
		h_{FE3}	$V_{CE}=-2\text{V}$, $I_C=-5\text{A}$	50			
Switching Time	Turn On Time	t_{ON}	 0 I_{B1} 20μsec $-I_{B1}=-I_{B2}=0.2\text{A}$ DUTY CYCLE $\leq 1\%$		0.15	1	μS
	Storage Time	t_{STG}			0.78	2.5	μS
	Fall Time	t_F			0.18	1	μS

Pulse test: $P_W \leq 350\mu\text{S}$, Duty Cycle $\leq 2\%$ Pulse.

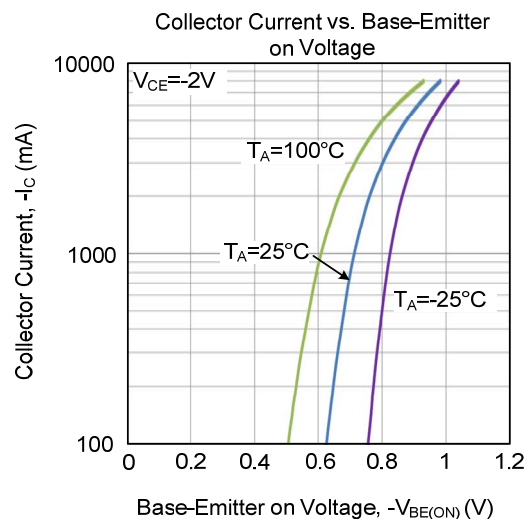
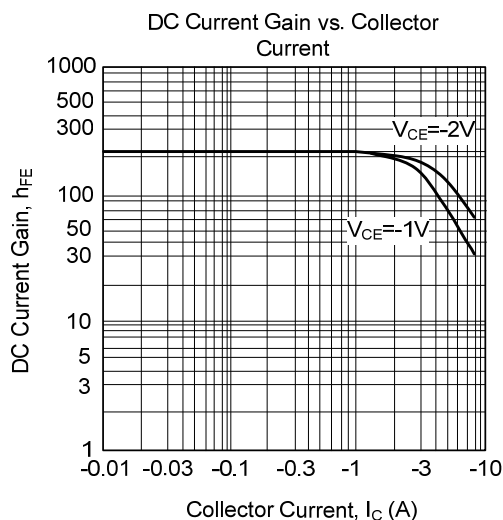
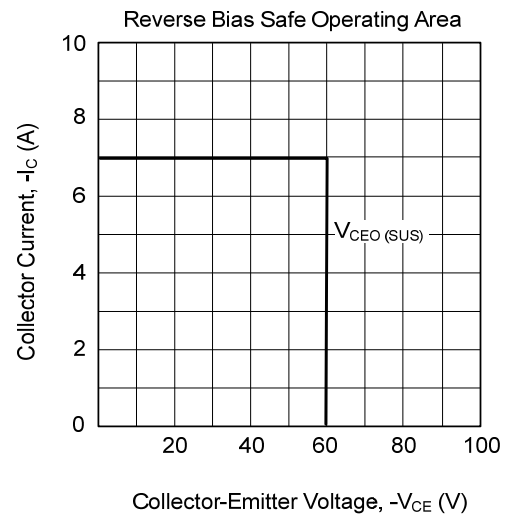
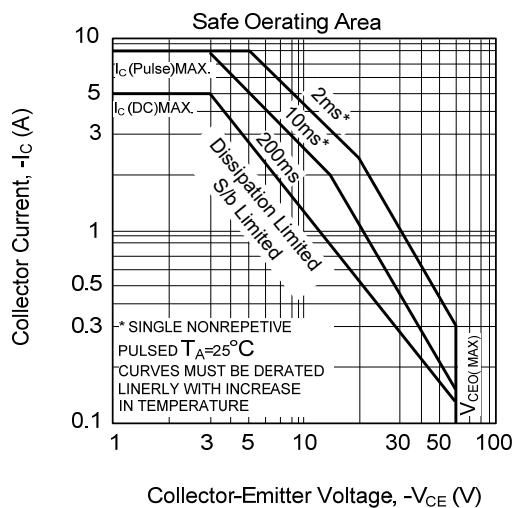
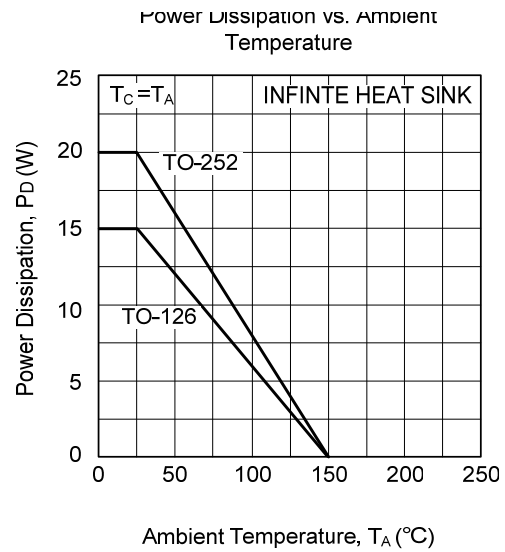
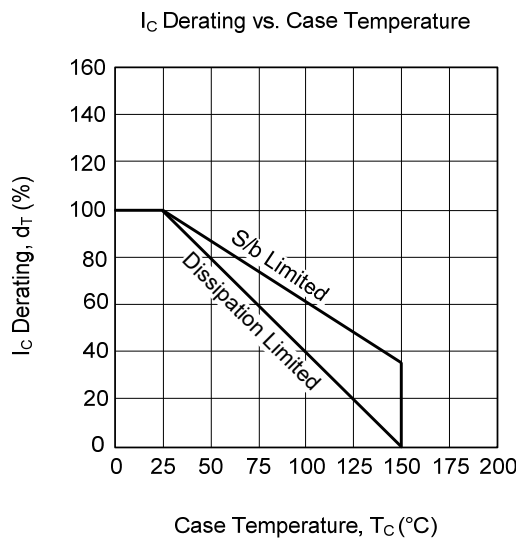
■ CLASSIFICATION OF h_{FE2}

RANK	O	Y
RANGE	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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