



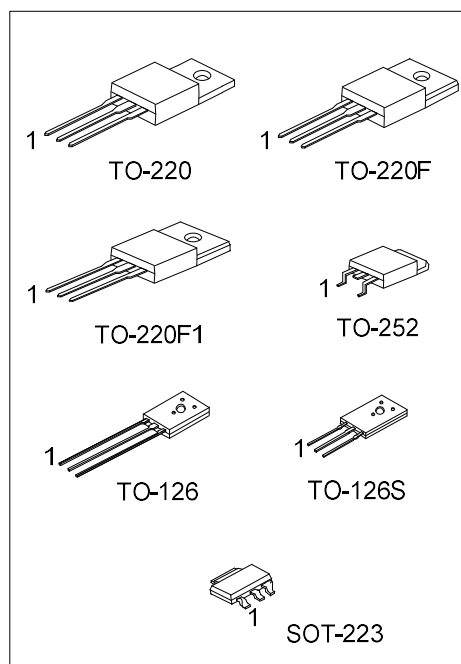
2SB1151B

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	
2SB1151BL-x-AA3-R	2SB1151BG-x-AA3-R	SOT-223	E	C	B	Tape Reel
2SB1151BL-x-TA3-T	2SB1151BG-x-TA3-T	TO-220	B	C	E	Tube
2SB1151BL-x-TF1-T	2SB1151BG-x-TF1-T	TO-220F1	B	C	E	Tube
2SB1151BL-x-TF3-T	2SB1151BG-x-TF3-T	TO-220F	B	C	E	Tube
2SB1151BL-x-T60-K	2SB1151BG-x-T60-K	TO-126	E	C	B	Bulk
2SB1151BL-x-T60-T	2SB1151BG-x-T60-T	TO-126	E	C	B	Tube
2SB1151BL-x-T6S-K	2SB1151BG-x-T6S-K	TO-126S	E	C	B	Bulk
2SB1151BL-x-T6S-T	2SB1151BG-x-T6S-T	TO-126S	E	C	B	Tube
2SB1151BL-x-TN3-R	2SB1151BG-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
	(3) Rank	TF3: TO-220F, TN3: TO-252, T60: TO-126
	(4) Green Package	T6S: TO-126S (3) x: refer to Classification of h _{FE2} (4) G: Halogen Free and Lead Free, L: Lead Free

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PNP SILICON TRANSISTOR

MARKING

PACKAGE	MARKING
SOT-223	2SB1151B□ □□□ 1 L: Lead Free G: Halogen Free Date Code
TO-126 TO-126S	UTC □□□ 2SB1151B□ 1 Date Code L: Lead Free G: Halogen Free
TO-220 / TO-220F TO-220F1 / TO-252	UTC 2SB1151B□ □□□□□ 1 Lot Code L: Lead Free G: Halogen Free Date Code

■ 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/TO-220F TO-220F1		2	W
	TO-126/TO-126S		1.3	W
	TO-252		1.6	W
Junction Temperature		T _J	+150	°C
Storage Temperature		T _{STG}	-55 ~ +150	°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.

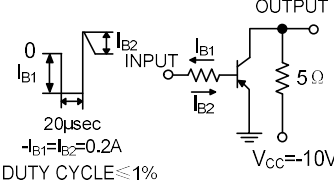
2. P_w ≤ 10ms, Duty Cycle ≤ 50%.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-223	θ _{JA}	125 (Note)	°C/W
	TO-220/TO-220F TO-220F1		62.5	°C/W
	TO-126/ TO-126S		96.2	°C/W
	TO-252		79 (Note)	°C/W

Note: Device mounted on FR-4 substrate P_c board, 2oz copper, with 1inch square copper plate.

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

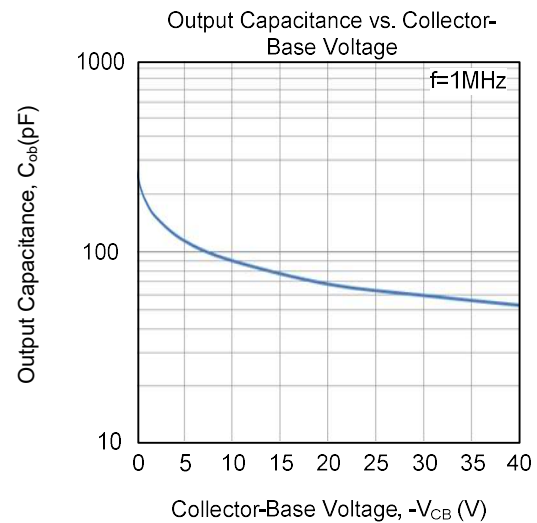
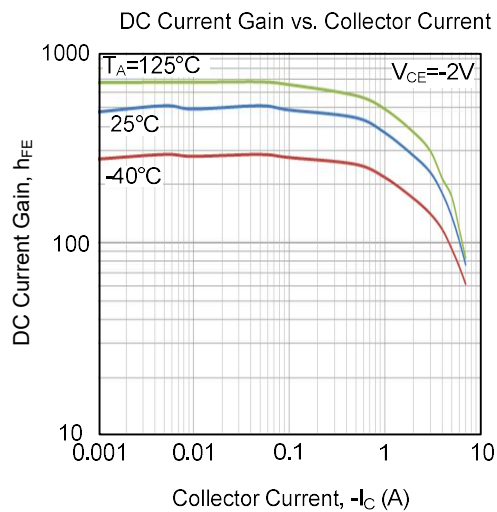
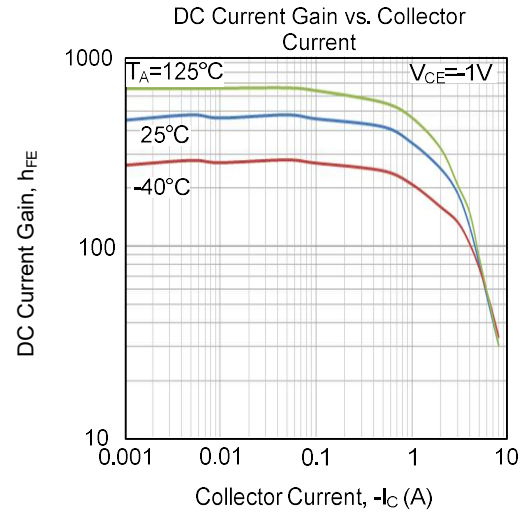
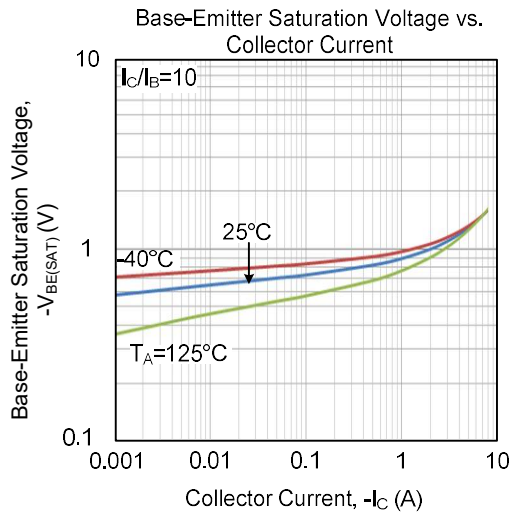
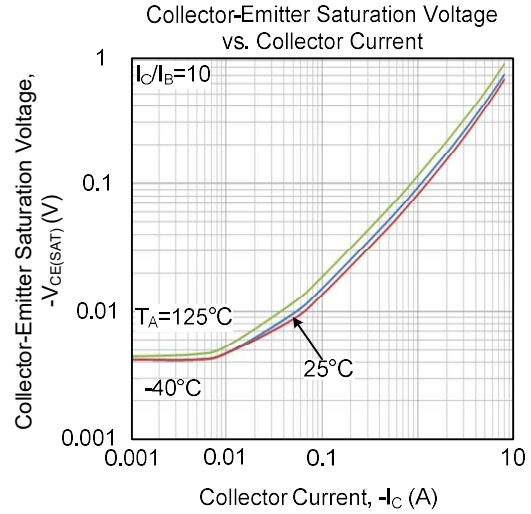
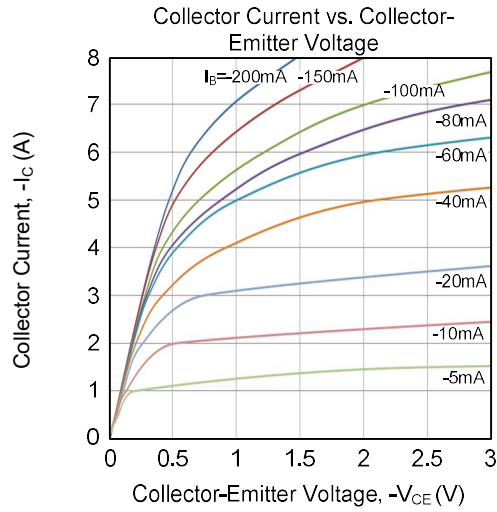
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Voltage		BV _{CBO}	I _C =-100uA, I _E =0	-60			V
Collector-Emitter Voltage		BV _{CEO}	I _C =-1mA, I _B =0	-60			V
Emitter-Base Voltage		BV _{EBO}	I _E =-100uA, I _C =0	-7			V
Collector Cut-off Current		I _{CBO}	V _{CB} =-50V, I _E =0			-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		-0.17	-0.3	V
Base-Emitter Saturation Voltage		V _{BE(SAT)}	I _C =-2A, I _B =-0.2A		-1	-1.2	V
DC Current Gain		h _{FE1}	V _{CE} =-1V, I _C =-0.1A	150			
		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}			0.15	2.5	μS
	Fall Time	t _F			0.14	1	μS

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

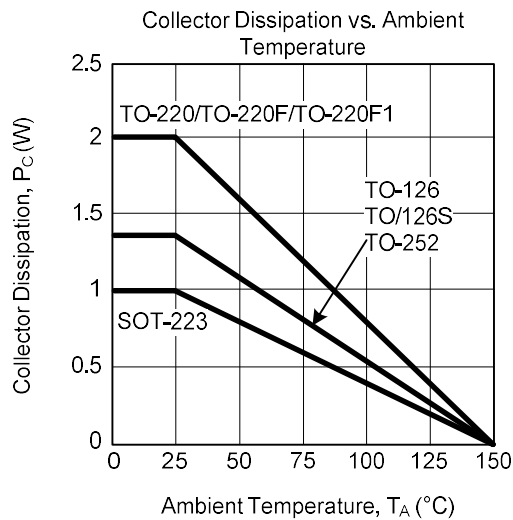
■ CLASSIFICATION OF h_{FE2}

RANK	O	Y
RANGE	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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