



2SB1202

PNP PLANAR TRANSISTOR

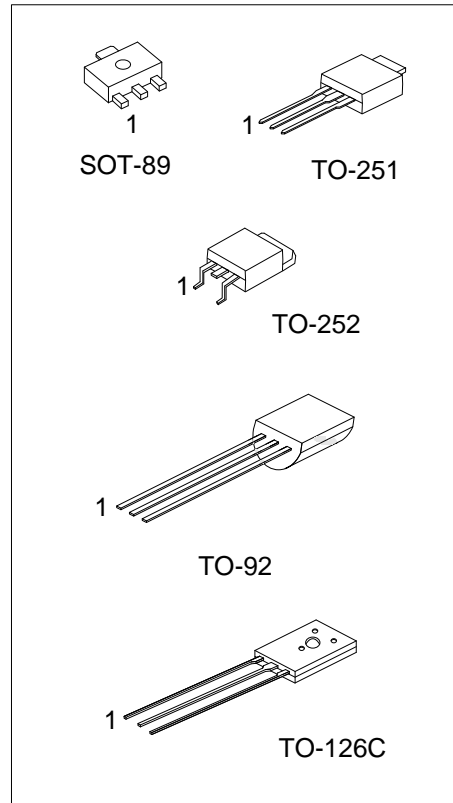
HIGH CURRENT SWITCHING APPLICATION

DESCRIPTION

The UTC **2SB1202** applies to voltage regulators, relay drivers, lamp drivers, and electrical equipment.

FEATURES

- * Adoption of FBET, MBIT processes
- * Large current capacity and wide ASO
- * Low collector-to-emitter saturation voltage
- * Fast switching speed



ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1202L-x-AB3-R	2SB1202G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SB1202L-x-TM3-T	2SB1202G-x-TM3-T	TO-251	B	C	E	Tube
2SB1202L-x-TN3-R	2SB1202G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SB1202L-x-T6C-K	2SB1202G-x-T6C-K	TO-126C	E	C	B	Bulk
2SB1202L-x-T92-B	2SB1202G-x-T92-B	TO-92	E	C	B	Tape Box
2SB1202L-x-T92-K	2SB1202G-x-T92-K	TO-92	E	C	B	Bulk

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

<p>2SB1202G-x-AB3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) K: Bulk, T: Tube, R: Tape Reel (2) AB3: SOT-89, TM3: TO-251, TN3: TO-252 T6C: TO-126C, T92: TO-92 (3) x: refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

SOT-89	TO-251/TO-252
<p> Date Code L: Lead Free G: Halogen Free </p>	<p> Lot Code L: Lead Free G: Halogen Free Date Code </p>
TO-126C	TO-92
<p> Date Code L: Lead Free G: Halogen Free </p>	<p> L: Lead Free G: Halogen Free Date Code </p>

■ 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}	-50	V
Emitter-Base Voltage		V _{EBO}	-6	V
Collector Power Dissipation	T _C =25°C	SOT-89	3.5	W
		TO-251	28	W
		TO-252	28	W
		TO-126C	20	W
		TO-92	1.5	W
Collector Current	DC	I _C	-3	A
	PULSE	I _{CP}	-6	A
Junction Temperature		T _J	+150	°C
Storage Temperature		T _{STG}	-55 ~ +150	°C

Note: 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.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Case	SOT-89	θ _{JC}	35.7	°C/W
	TO-251		4.53	°C/W
	TO-252		4.53	°C/W
	TO-126C		6.25	°C/W
	TO-92		83.3	°C/W

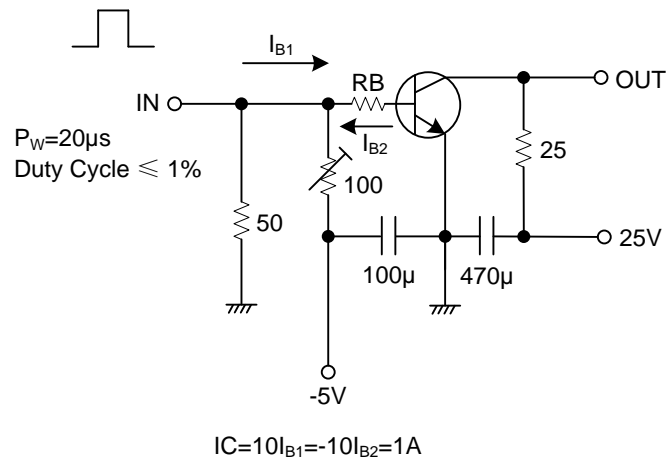
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
C-B Breakdown Voltage	BV _{CBO}	I _C =-10μA, I _E =0	-60			V
C-E Breakdown Voltage	BV _{CEO}	I _C =-1mA, R _{BE} =∞	-50			V
E-B Breakdown Voltage	BV _{EBO}	I _E =-10μA, I _C =0	-6			V
Collector Cutoff Current	I _{CBO}	V _{CB} =-40V, I _E =0			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0			-1	μA
C-E Saturation Voltage	V _{CE(SAT)}	I _C =-2A, I _B =-100mA		-0.35	-0.7	V
B-E Saturation Voltage	V _{BE(SAT)}	I _C =-2A, I _B =-100mA		-0.94	-1.2	V
DC Current Gain	h _{FE1}	V _{CE} =-2V, I _C =-100mA	100		560	
	h _{FE2}	V _{CE} =-2V, I _C =-3A	35			
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _C =-50mA		150		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		39		pF
Turn-on Time	t _{ON}	See test circuit		70		ns
Storage Time	t _{STG}	See test circuit		450		ns
Fall Time	t _F	See test circuit		35		ns

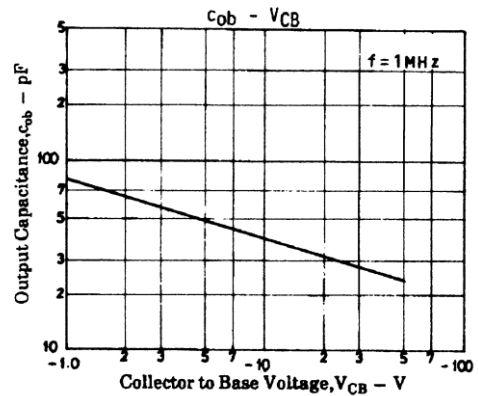
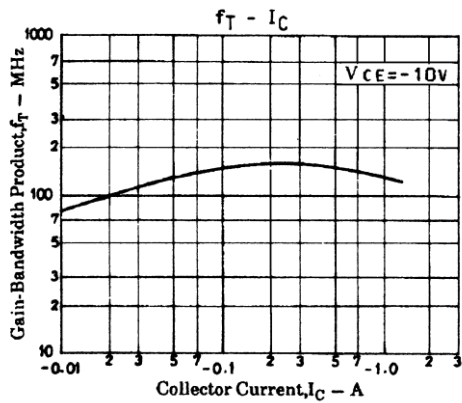
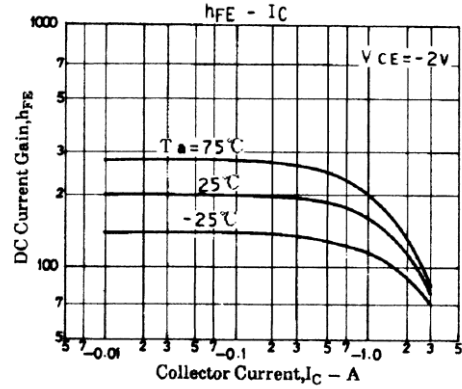
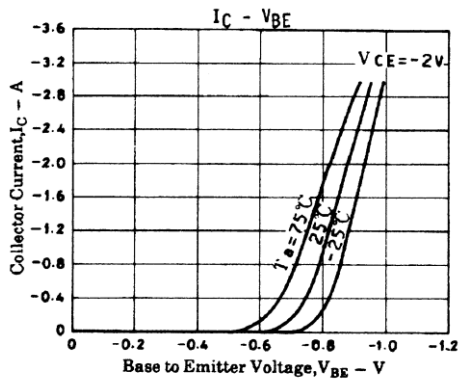
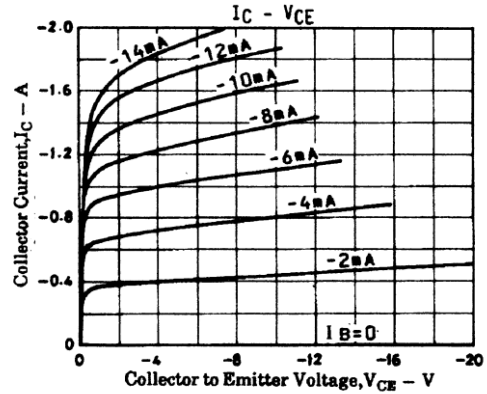
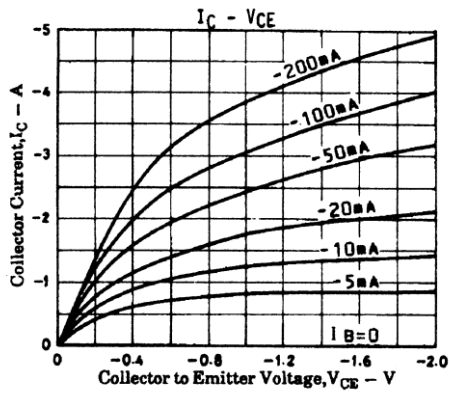
■ CLASSIFICATION OF h_{FE1}

RANK	R	S	T	U
RANGE	100-200	140-280	200-400	280-560

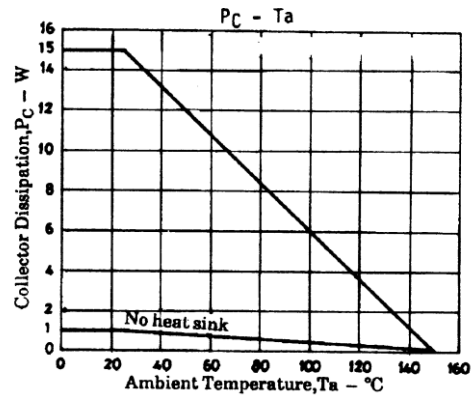
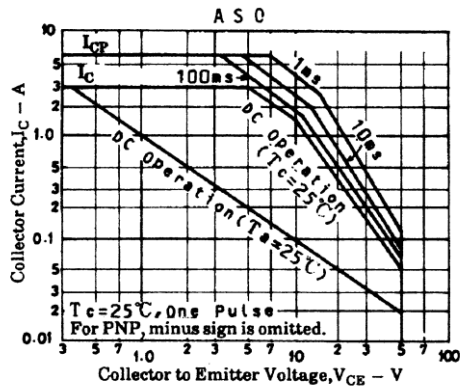
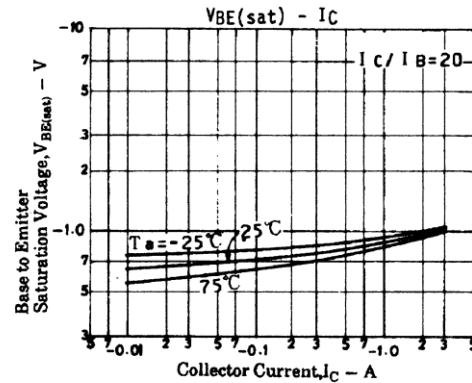
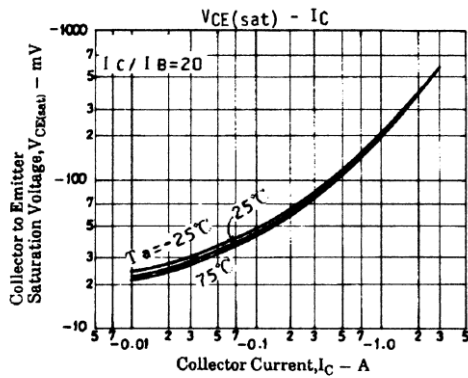
■ TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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