PNP Epitaxial Planar Silicon Transistors 2SB1202

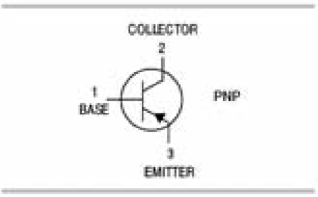
FEATURES

- Adoption of FBET,MBIT processes.
- Large current capacity and wide ASO.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Small and slim package making it easy to Make 2SB1202-used sets smaller.

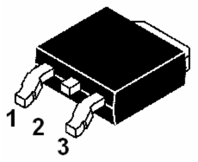
Lead-free

APPLICATIONS

- High-Current Switching Applications.
- Voltage regulators,relay drivers,lamp drivers, Electrical equipment.



TO-251



TO-252

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	**Parameter**	**Value**	**Units**
V_{CBO}	Collector-Base Volage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-3	A
I_{CP}	Collector Power Dissipation	-6	A
P_C	Collector Power Dissipation	1	W
T_j ,T_{stg}	Junction and Storage temperature range	-55 to +150	℃

PNP Epitaxial Planar Silicon Transistors 2SB1202

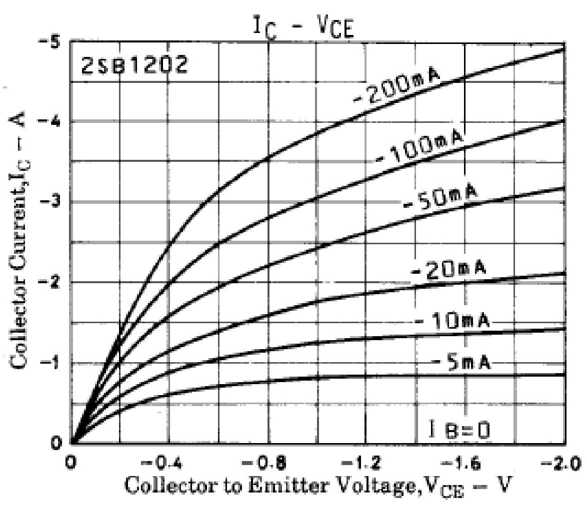
ELECTRICAL CHARACTERISTICS@ Ta=25℃ unless otherwise specified

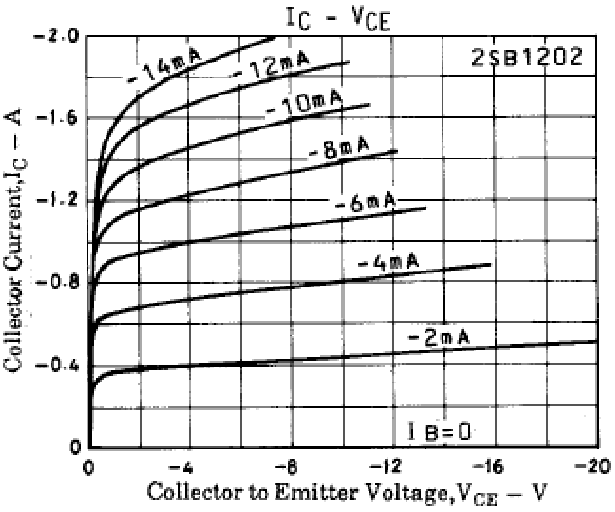
Parameter	**Symbol**	**Test conditions**	**MIN**	**TYP**	**MAX**	**UNIT**
Collector-base breakdown voltage	V_{CBO}	I_C=-10uA,I_E=0	-60			V
Collector-emitter breakdown voltage	V_{CEO}	I_C=-1mA,I_B=0	-50			V
Emitter-base breakdown voltage	V_{EBO}	I_E=-10uA,I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}=-40V,I_E=0			-1	uA
Emitter cut-off current	I_{EBO}	V_{EBO}=-4V,I_C=0			-1	uA
DC current gain	h_{FE}	V_{CE}=-2V,I_C=-100mA V_{CE}=-2V,I_C=-3A	100 35		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-2A ,I_B=-0.1A		-0.35	-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-2A ,I_B=-0.1A		-0.94	-1.2	V
Transition frequency	f_T	V_{CE}=-10V,I_E=-50mA		150		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,f=1MHz		39		pF

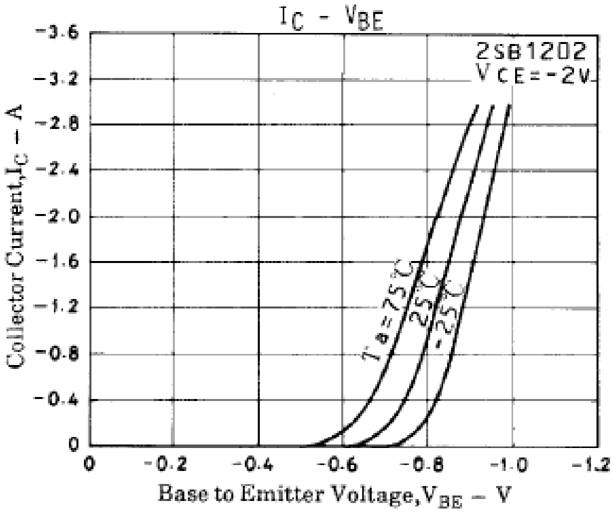
CLASSIFICATION OF $h_{FE(1)}$

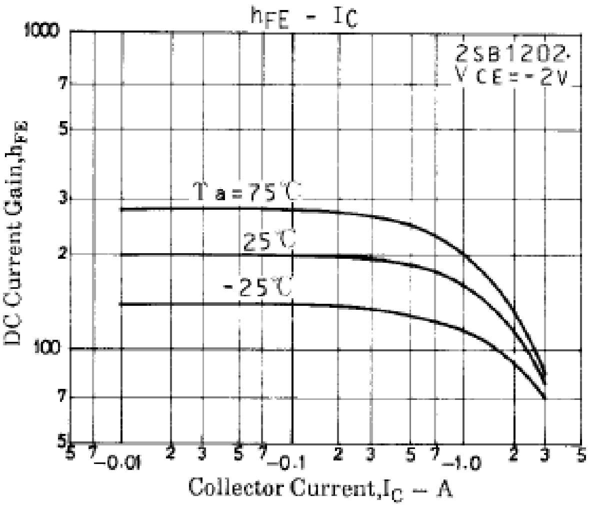
Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560

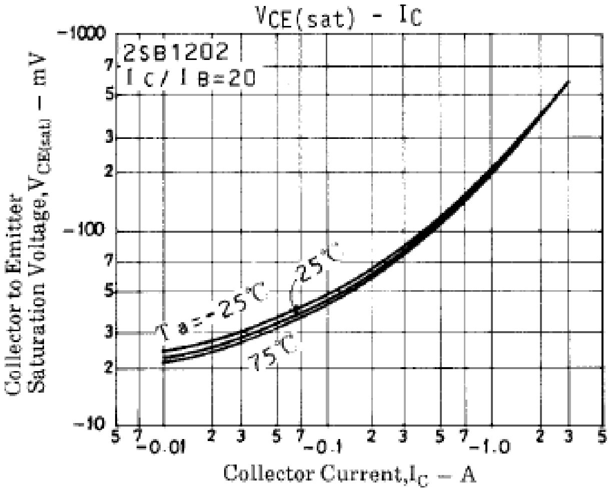
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

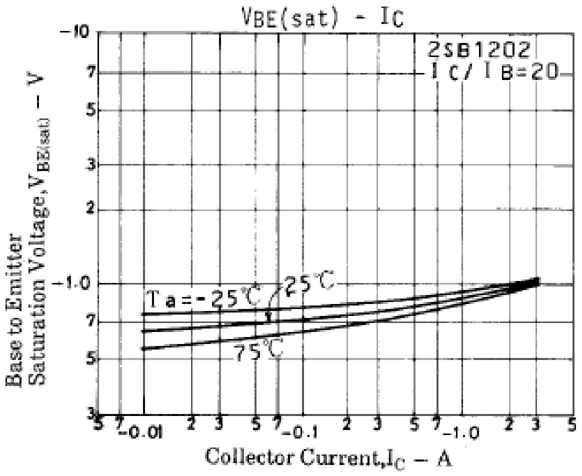


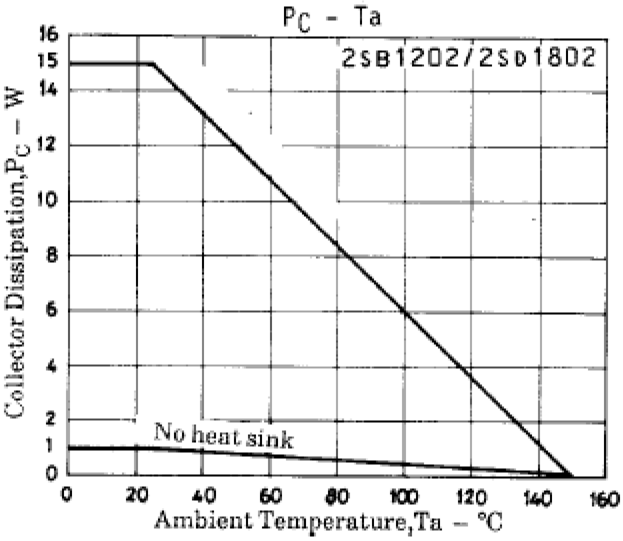



IC - VBE
2SB1202
VCE=-2V
Ta=75℃
25℃
-25℃
Collector Current,IC – A
-3.6
-3.2
-2.8
-2.4
-2.0
-1.6
-1.2
-0.8
-0.4
0
0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
Base to Emitter Voltage,VBE – V


hFE - IC
2SB1202
VCE=-2V
Ta=75℃
25℃
-25℃
DC Current Gain,hFE
1000
7
5
3
2
100
7
5
5 7 -0.01 2 3 5 7 -0.1 2 3 5 7 -1.0 2 3 5
Collector Current,IC – A


VCE(sat) - IC
2SB1202
IC/IB=20
Ta=-25℃
25℃
75℃
Collector to Emitter Saturation Voltage,VCE(sat) – mV
-1000
7
5
3
2
-100
7
5
3
2
-10
5 7 -0.01 2 3 5 7 -0.1 2 3 5 7 -1.0 2 3 5
Collector Current,IC – A

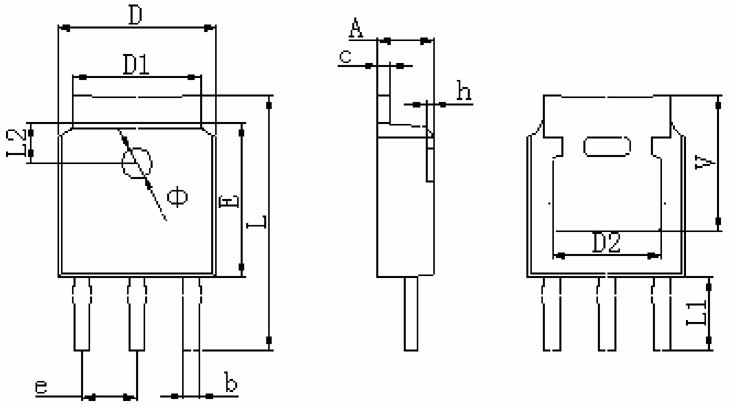

VBE(sat) - IC
2SB1202
IC/IB=20
Ta=-25℃
25℃
75℃
Base to Emitter Saturation Voltage,VBE(sat) – V
-10
7
5
3
2
-1.0
7
5
3
5 7 -0.01 2 3 5 7 -0.1 2 3 5 7 -1.0 2 3 5
Collector Current,IC – A


PC - Ta
2SB1202/2SD1802
No heat sink
Collector Dissipation,PC – W
16
15
14
12
10
8
6
4
2
1
0
0
20
40
60
80
100
120
140
160
Ambient Temperature,Ta – °C

PACKAGE OUTLINE

Plastic surface mounted package

TO-251

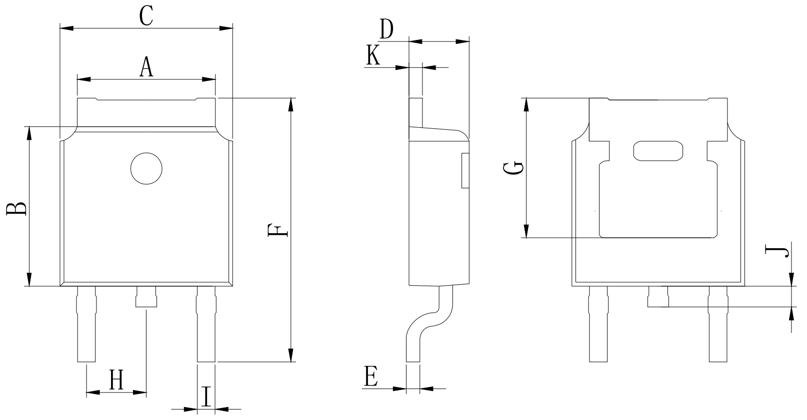


TO-251		
A	2.200	2.400
b	0.500	0.700
c	0.460	0.580
D	6.500	6.700
D1	5.100	5.460
D2	4.830 Typ.	
E	6.000	6.200
e	2.186	2.386
L	12.000	12.600
L1	5.100 Typ.	
L2	1.400	1.700
Φ	1.100	1.300
h	0.000	0.300
V	5.350 Typ.	
All Dimensions in mm		

PACKAGE OUTLINE

Plastic surface mounted package

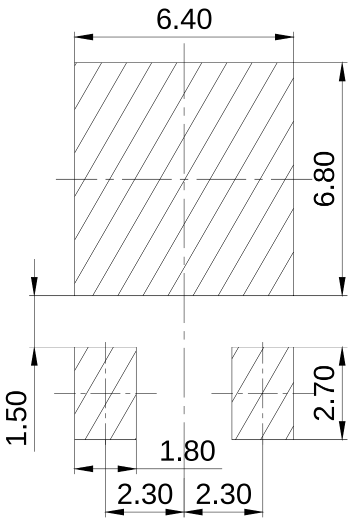
TO-252



TO-252		
A	4.95	5.59
B	5.40	6.63
C	6.05	7.10
D	2.20	2.40
E	0.40	0.61
F	8.80	10.60
G	5.35 Typ.	
H	1.98	2.59
I	0.50	0.90
J	0.50	1.20
K	0.45	0.89
All Dimensions in mm		

PNP Epitaxial Planar Silicon Transistors **2SB1202**

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
2SB1202	TO-251/252	80PCS/Tube
	TO-252	2500PCS/Tape&Reel