

SANYO	No.3151	2SB1451/2SD2200
		PNP/NPN Epitaxial Planar Silicon Transistors 80V/5A Switching Applications

Features

- Surface mount type device making the following possible
 - Reduction in the number of manufacturing processes for 2SB1451/2SD2200-applied equipment
 - High density surface mount applications
 - Small size of 2SB1451/2SD2200-applied equipment
- Low collector-to-emitter saturation voltage
- Large current capacity

() : 2SB1451

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V_{CBO}	(-)90	V
Collector-to-Emitter Voltage	V_{CEO}	(-)80	V
Emitter-to-Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)5	A
Collector Current(Pulse)	I_{CP}	(-)9	A
Collector Dissipation	P_C	1.65	W
		30	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

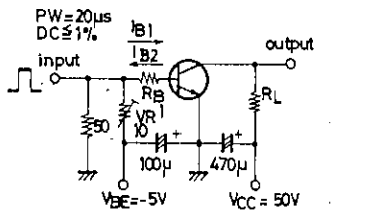
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)80V, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)2V, I_C = (-)1A$	70*		280*	
	$h_{FE(2)}$	$V_{CE} = (-)2V, I_C = (-)3A$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		20		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)3A, I_B = (-)0.3A$			0.4 (-0.5)	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)90			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)80			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)1mA, I_C = 0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit.	(0.2)0.1			µs
Storage Time	t_{stg}	"	(0.7)1.2			µs
Fall Time	t_f	"	(0.2)0.4			µs

* : The 2SB1451/2SD2200 are classified by 1A h_{FE} as follows:

70 Q 140	100 R 200	140 S 280
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Switching Time Test Circuit



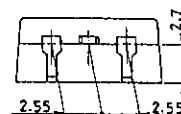
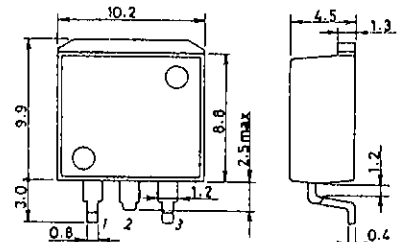
$10 I_{B1} = 10 I_{B2} = I_C = 2A$

For PNP, the polarity is reversed.

Unit (Resistance : Ω , Capacitance : F)

Package Dimensions 2069B

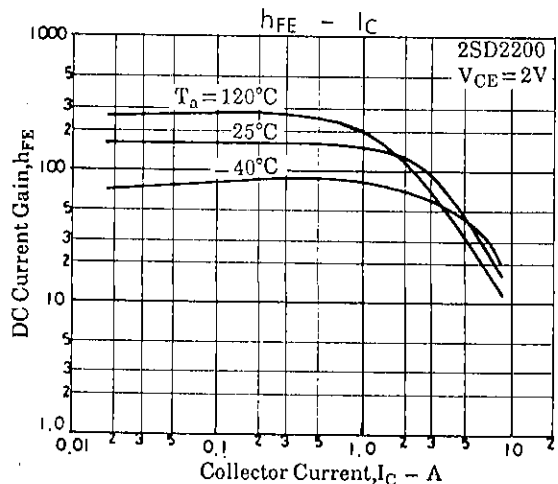
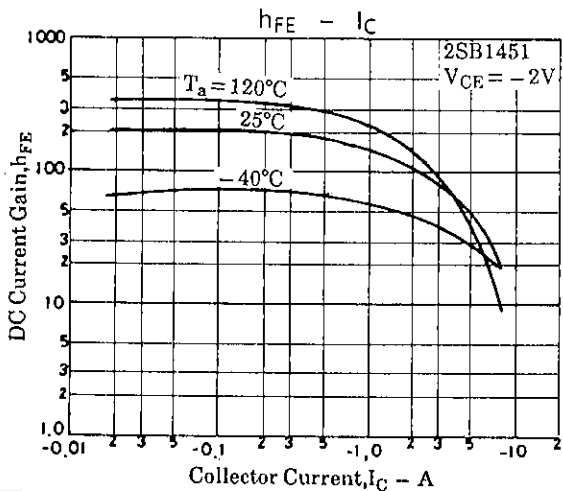
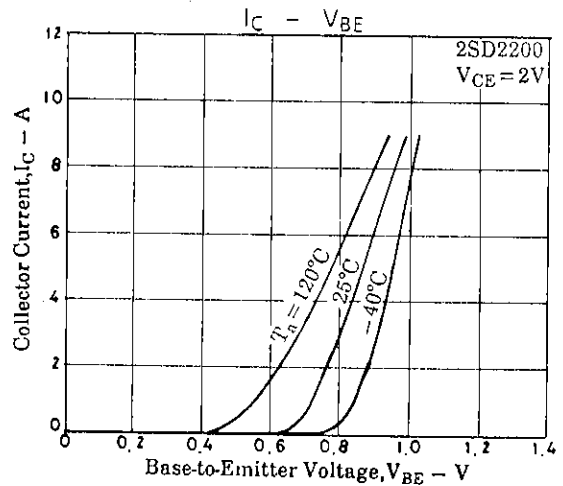
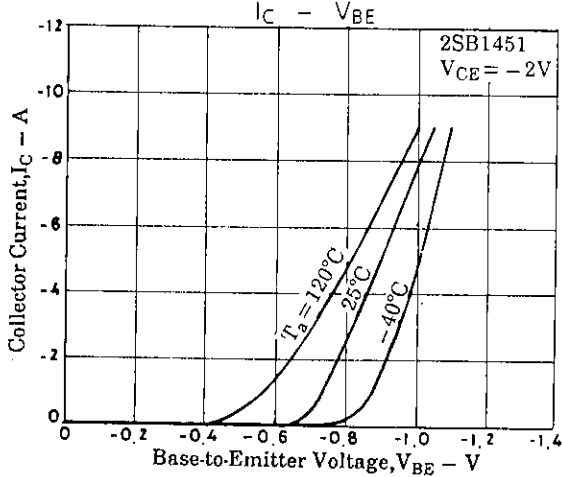
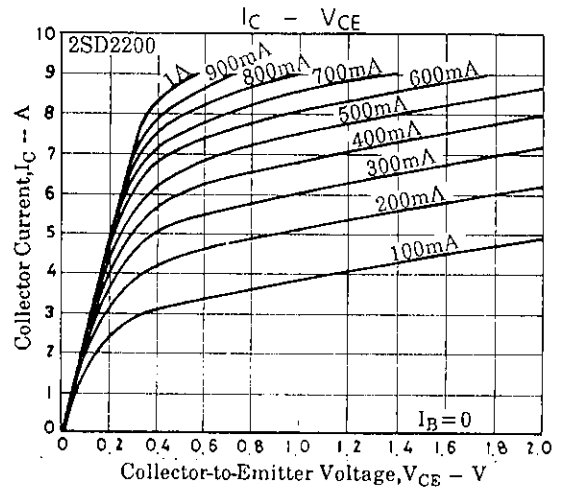
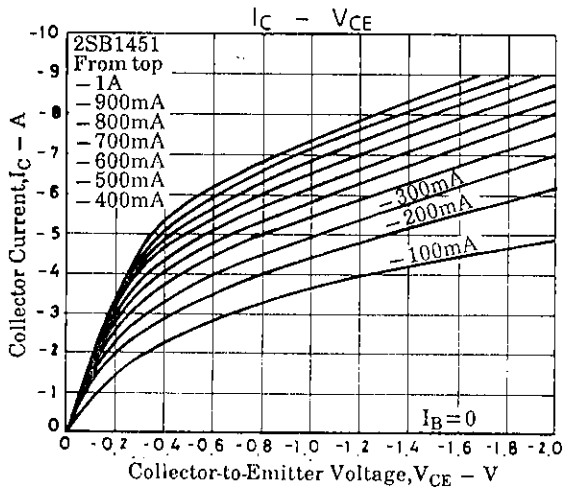
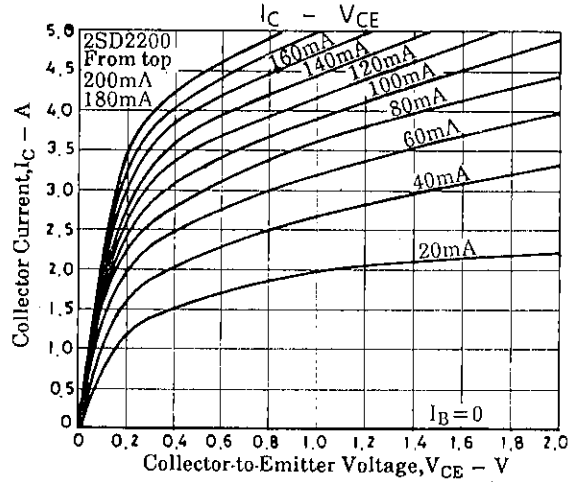
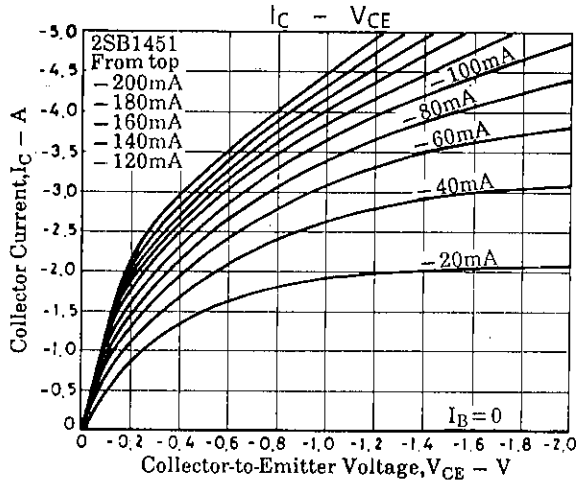
(unit : mm)



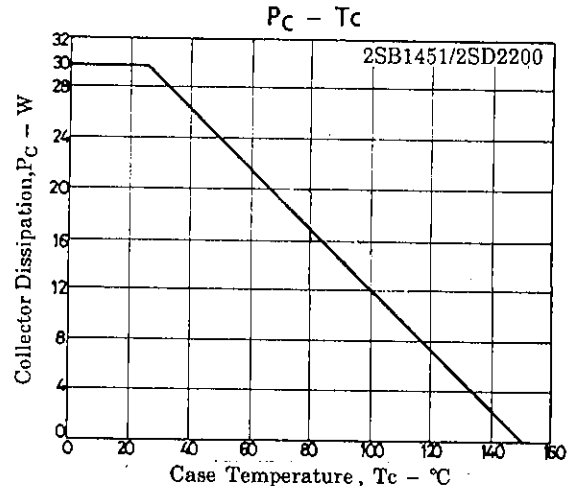
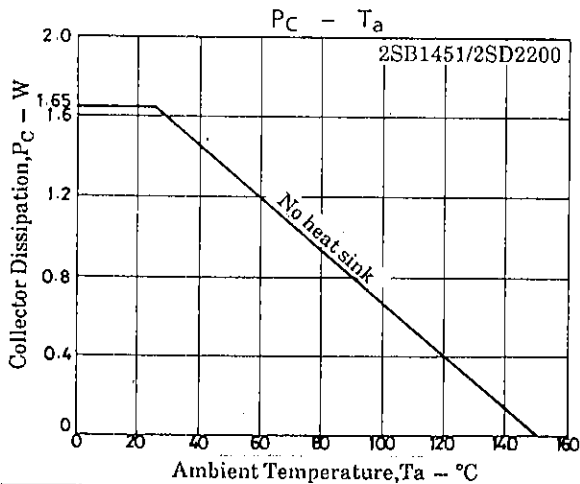
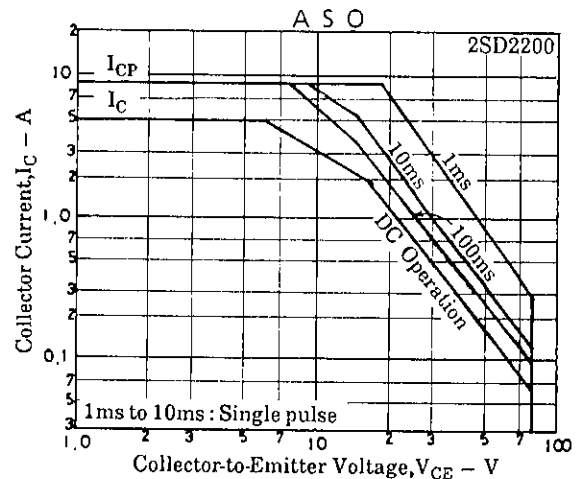
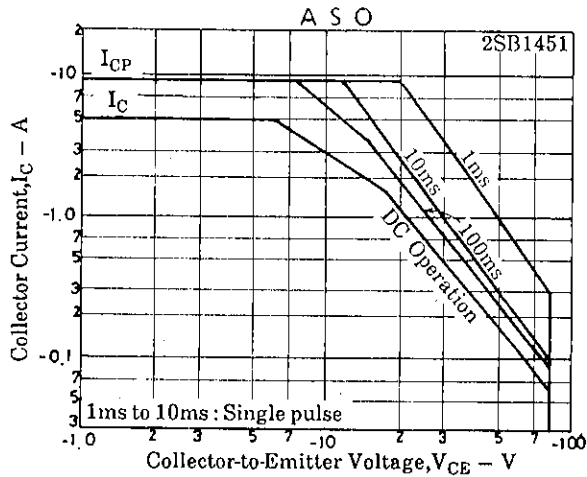
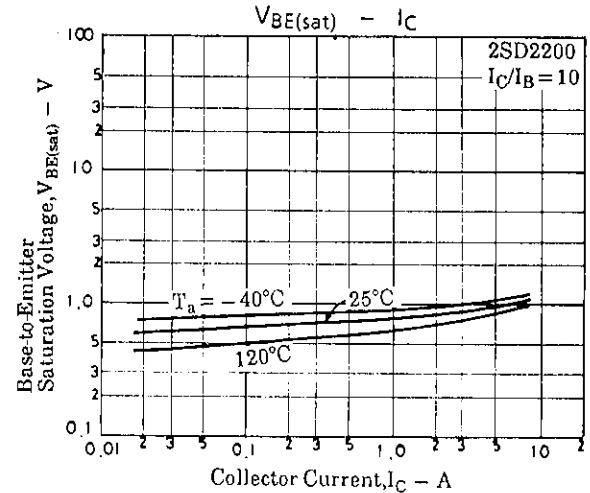
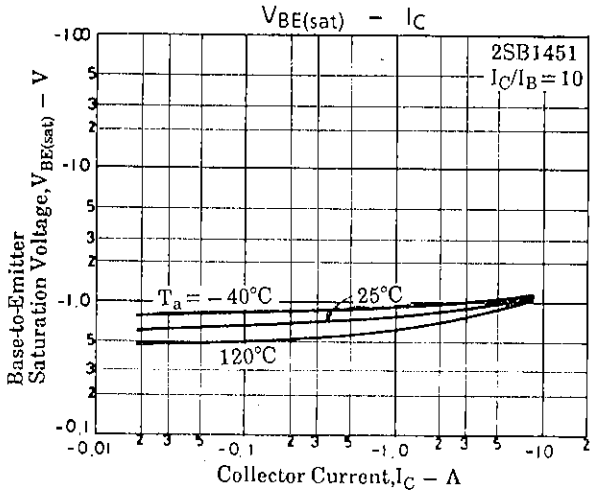
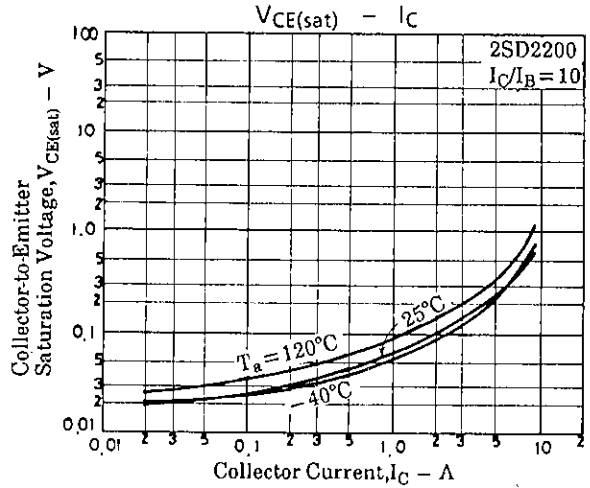
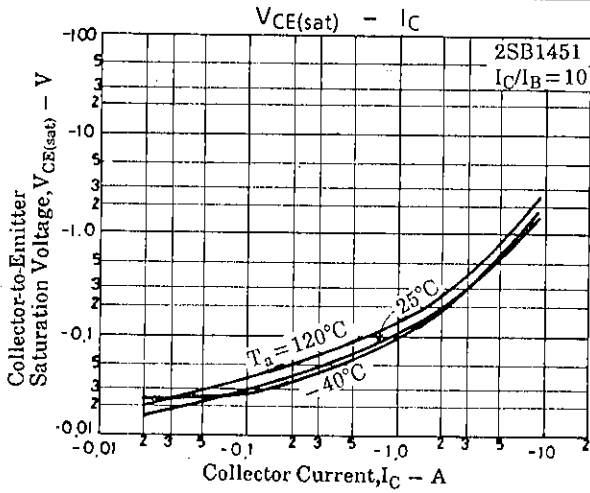
1 : Base
2 : Collector
3 : Emitter

SANYO : SMP-FD

2SB1451/2SD2200



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