

SANYO

No.3140A

2SC4521

NPN Epitaxial Planar Silicon Transistor

High-Speed Switching Applications

Features

- Adoption of FBET, MBIT processes
- Large current capacity
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Small-sized package

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Collector to Base Voltage	V_{CB0}	60	V
Collector to Emitter Voltage	V_{CE0}	45	V
Emitter to Base Voltage	V_{EB0}	5	V
Collector Current	I_C	3	A
Collector Current(Pulse)	I_{CP}	6	A
Collector Dissipation	P_C	Mounted on ceramic board ($250\text{mm}^2 \times 0.8\text{mm}$)	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

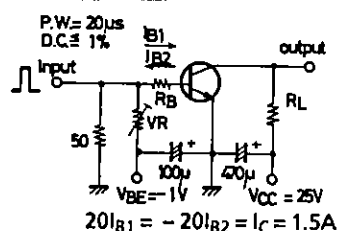
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 45\text{V}, I_E = 0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 2\text{V}, I_C = 0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	100※		400※	
	$h_{FE}(2)$	$V_{CE} = 2\text{V}, I_C = 3\text{A}$	40			
Gain-Bandwidth Product	f_T	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$		300		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		25		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 1.5\text{A}, I_B = 75\text{mA}$	0.25	0.7		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 1.5\text{A}, I_B = 75\text{mA}$	0.95	1.3		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	45			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		50	100	ns
Storage Time	t_{stg}	"		150	270	ns
Turn-OFF Time	t_{off}	"		180	350	ns

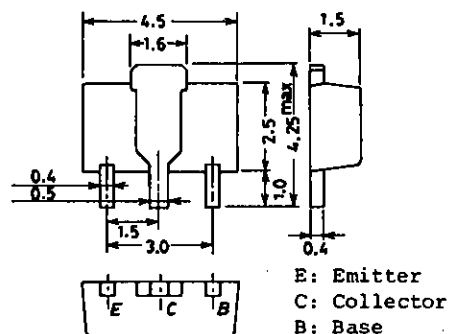
※ : The 2SC4521 is classified by 500mA h_{FE} as follows :

100 R 200	140 S 280	200 T 400
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Marking : CL

 h_{FE} rank : R,S,T**Switching Time Test Circuits**Unit (Resistance : Ω) Unit (Resistance : Ω)**Package Dimensions 2038**

(unit : mm)



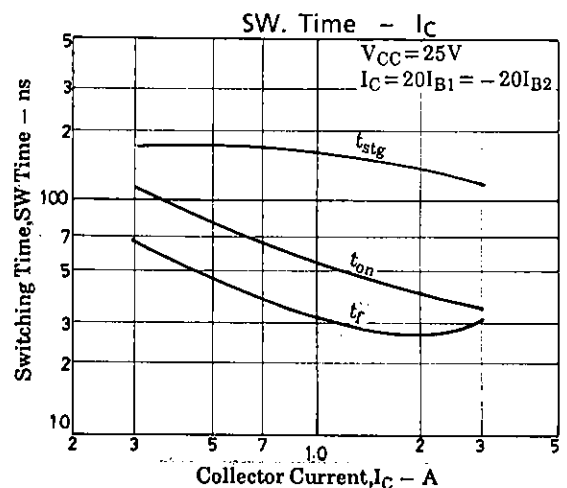
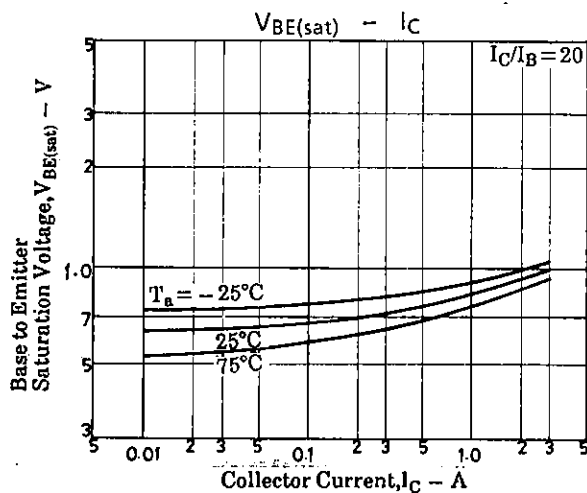
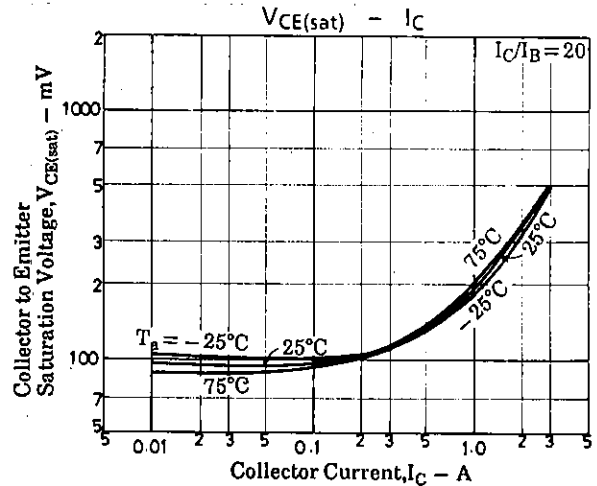
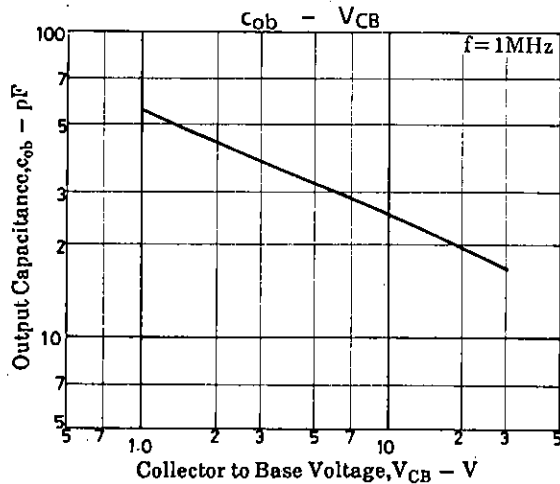
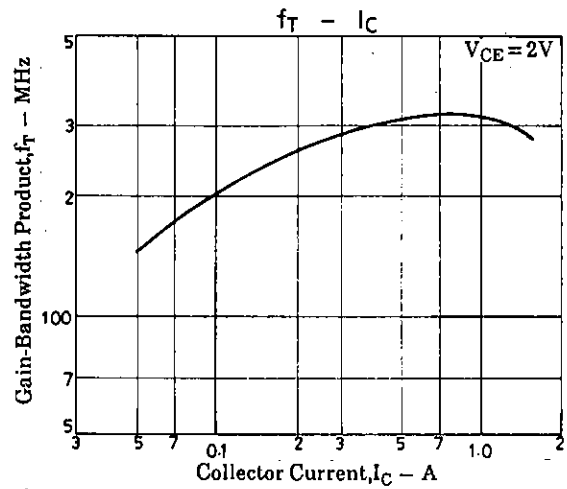
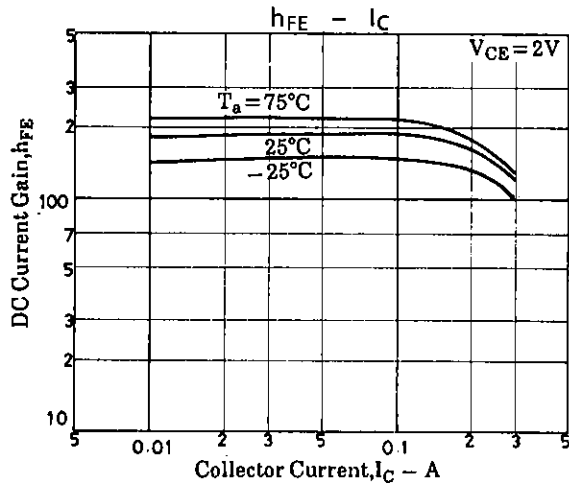
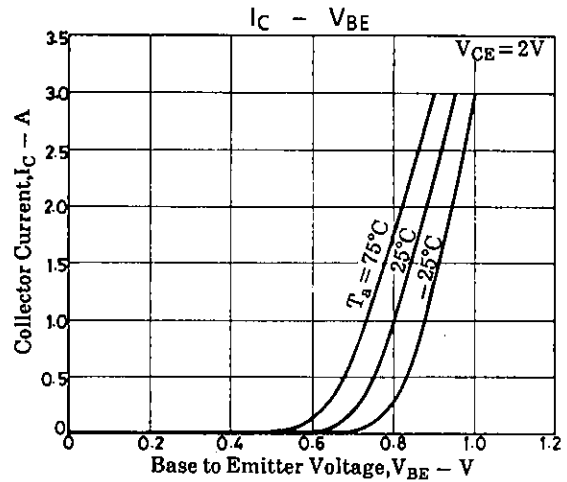
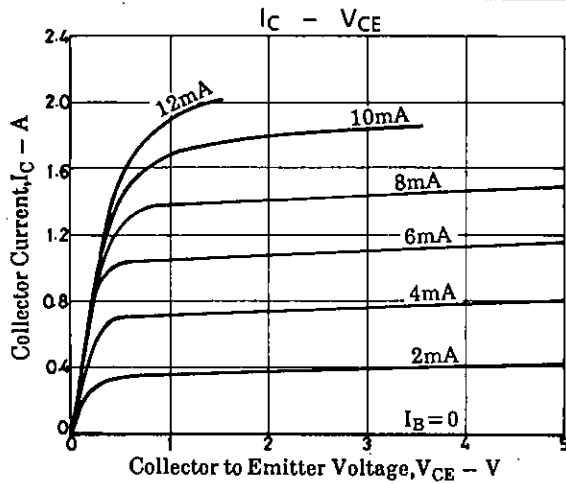
E: Emitter
C: Collector
B: Base

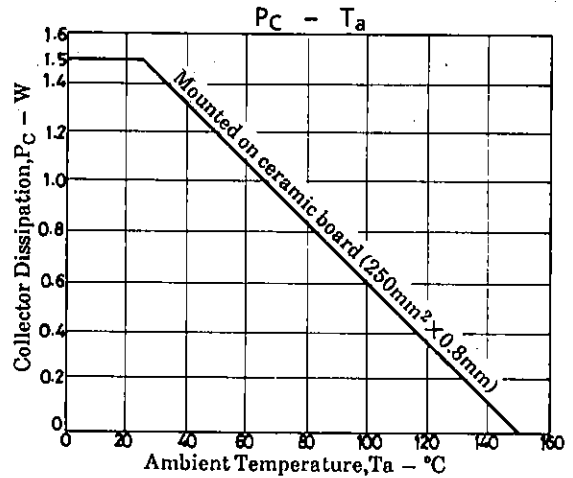
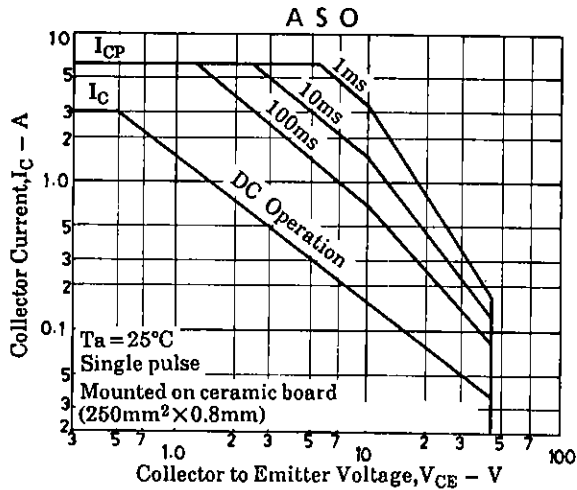
SANYO: PCP

(Bottom View)

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