



No.3142A

2SC4523

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

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	60	V
Collector to Emitter Voltage	V _{CEO}	45	V
Emitter to Base Voltage	V _{EBO}	5	V
Collector Current	I _C	8	A
Collector Current(Pulse)	I _{CP}	12	A
Collector Dissipation	P _C	1	W
		15	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	- 55 to + 150	°C

T_c = 25°C

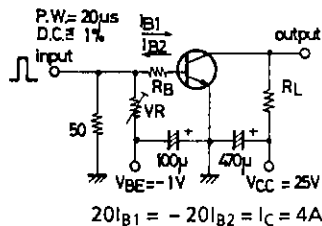
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 45V, I _E = 0			1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 2V, I _C = 0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} = 2V, I _C = 500mA	100*		400*	
	h _{FE} (2)	V _{CE} = 2V, I _C = 8A	40			
Gain-Bandwidth Product	f _T	V _{CE} = 2V, I _C = 500mA		250		MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		65		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 4A, I _B = 200mA	0.25	0.7		V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 4A, I _B = 200mA	0.95	1.3		V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 100μA, I _E = 0	60			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	45			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = 100μA, 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 2SC4523 is classified by 500mA h_{FE} as follows :

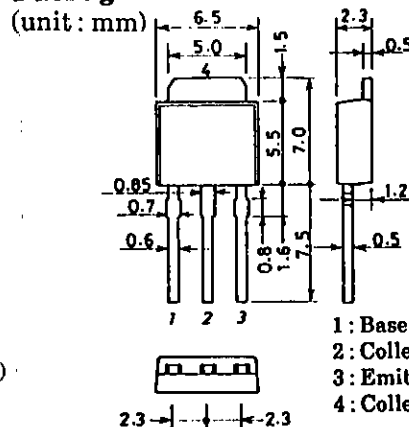
100 R 200	140 S 280	200 T 400
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Switching Time Test Circuit

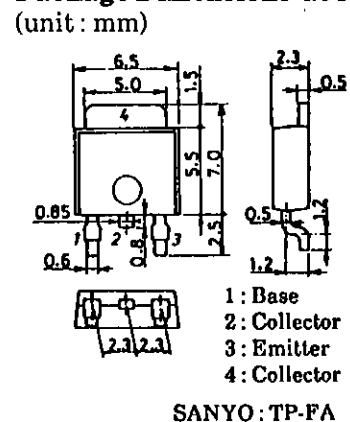


Unit (Resistance : Ω, Capacitance : F)

Package Dimensions 2045B

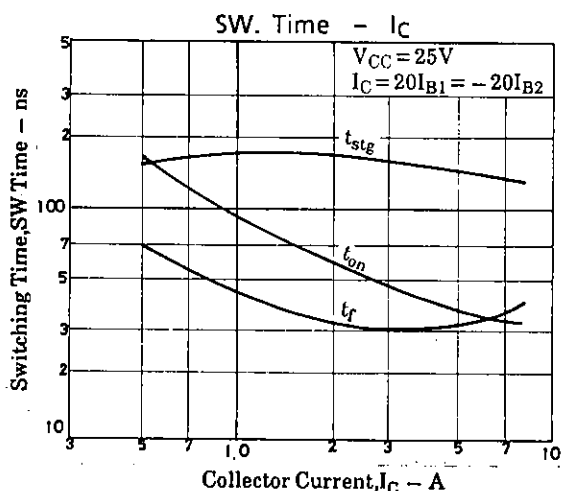
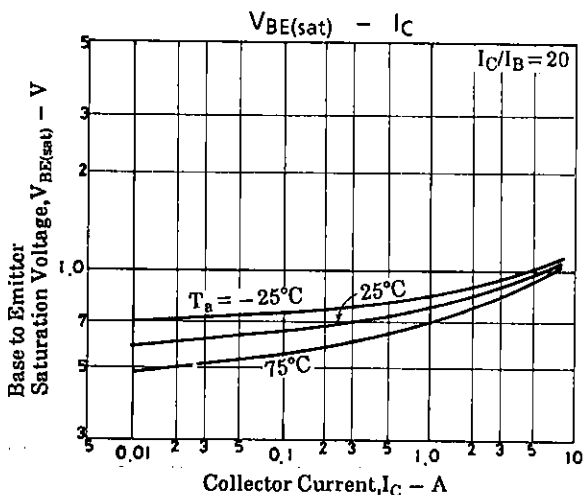
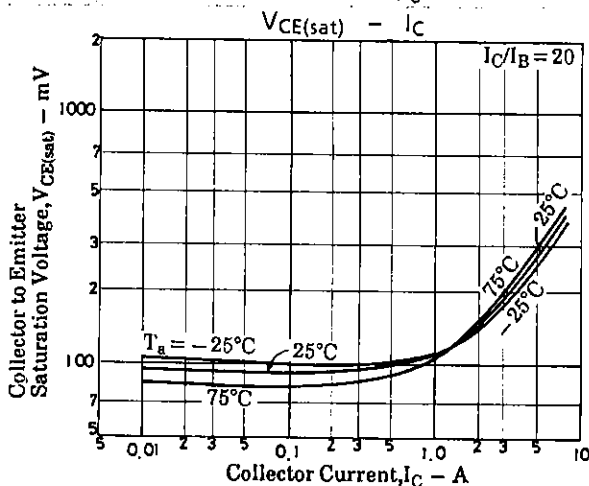
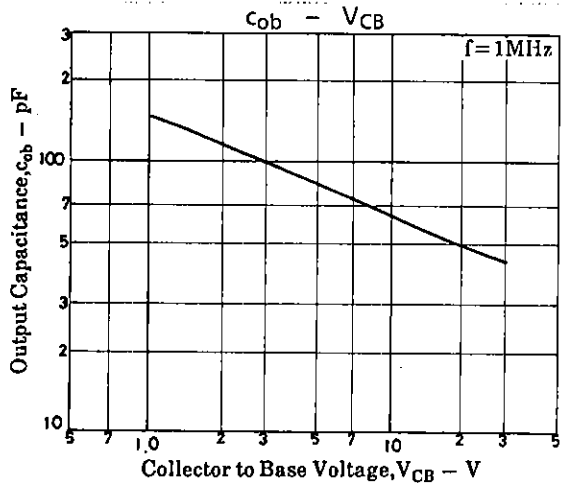
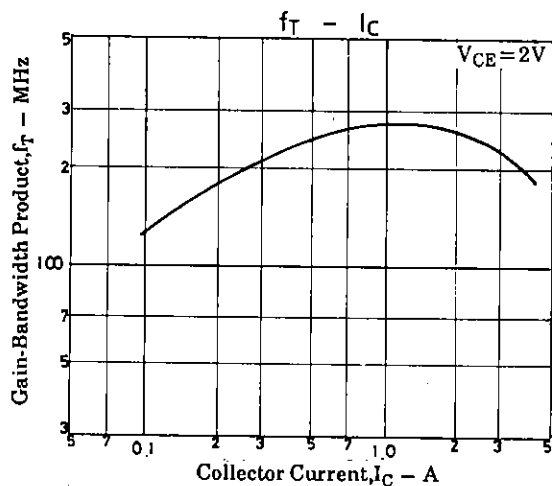
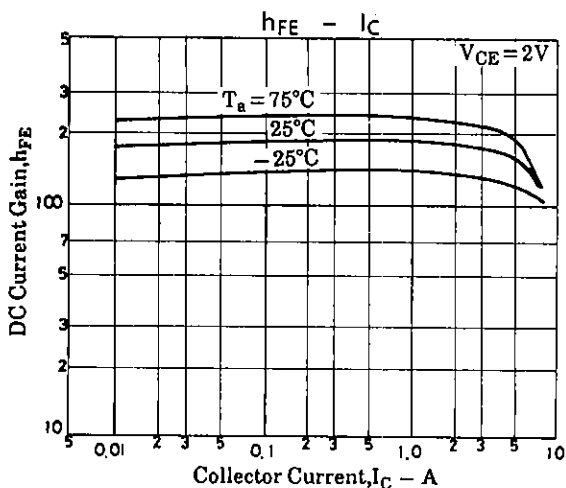
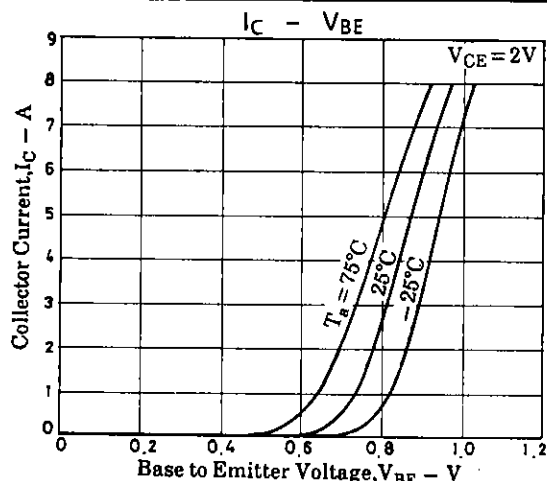
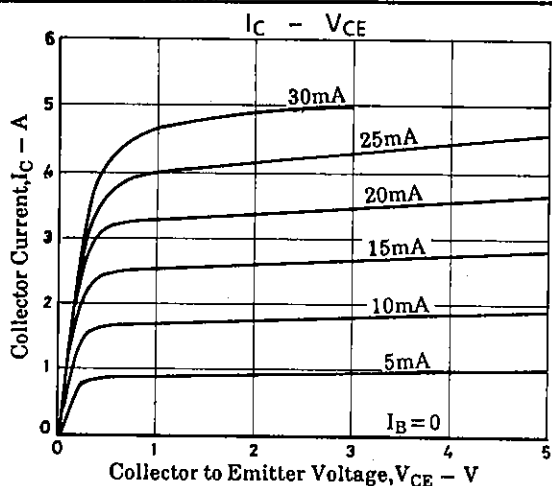


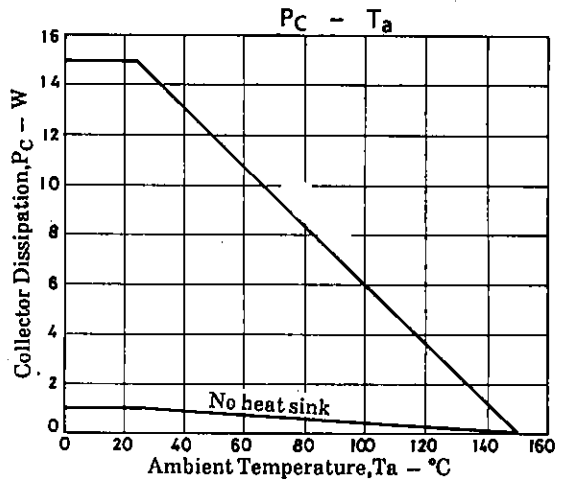
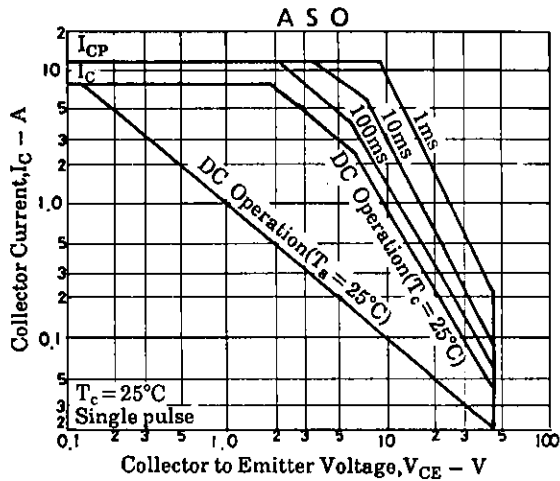
Package Dimensions 2044B



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