



No.3138

2SC4519
NPN Epitaxial Planar Silicon Transistor
High-Speed Switching Applications

Features

- Adoption of FBET process
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Small-sized package

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	500	mA
Collector Current(Pulse)	I _{CP}	1	A
Collector Dissipation	P _C	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

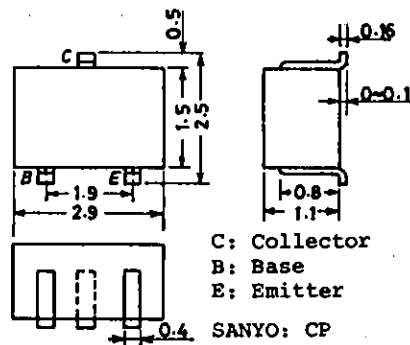
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 45V, I _E = 0			0.5	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 3V, I _C = 0			0.5	μA
DC Current Gain	h _{FE} (1)	V _{CE} = 2V, I _C = 50mA	100*		400*	
	h _{FE} (2)	V _{CE} = 2V, I _C = 500mA	40			
Gain-Bandwidth Product	f _T	V _{CE} = 2V, I _C = 50mA		350		MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		4		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 200mA, I _B = 10mA	0.15	0.45		V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 200mA, I _B = 10mA	0.8	1.2		V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 10μA, 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 = 10μA, I _C = 0	5			V
Turn-ON Time	t _{on}	See specified Test Circuit.		60	120	ns
Storage Time	t _{stg}	∞		150	270	ns
Turn-OFF Time	t _{off}	∞		200	350	ns

* : The 2SC4519 is classified by 50mA h_{FE} as follows :

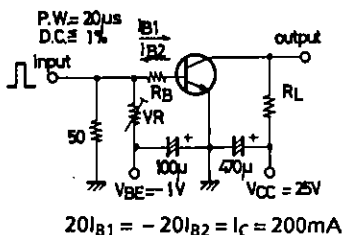
100	4	200	140	5	280	200	6	400
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Marking : 1T
h_{FE} rank : 4,5,6

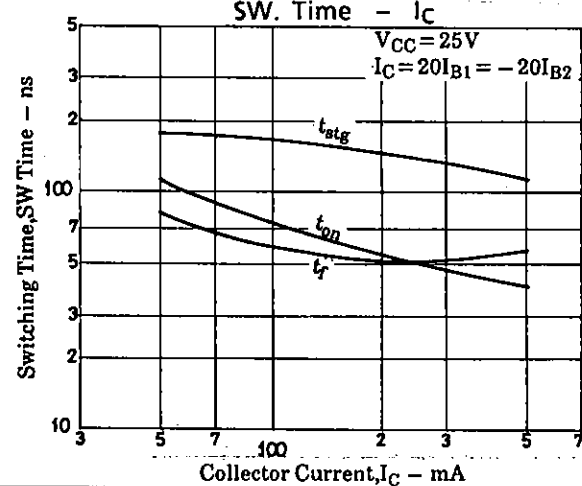
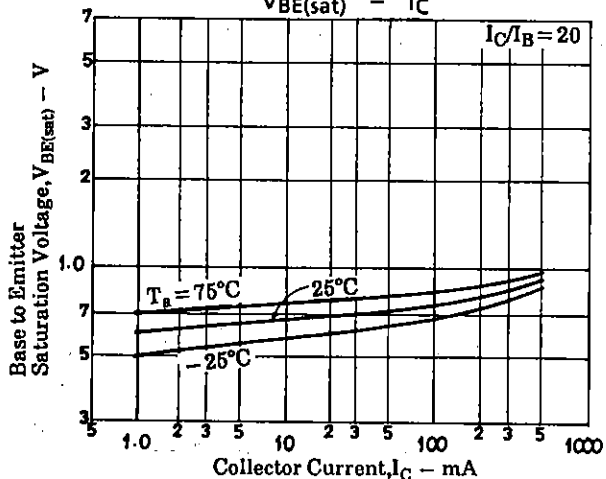
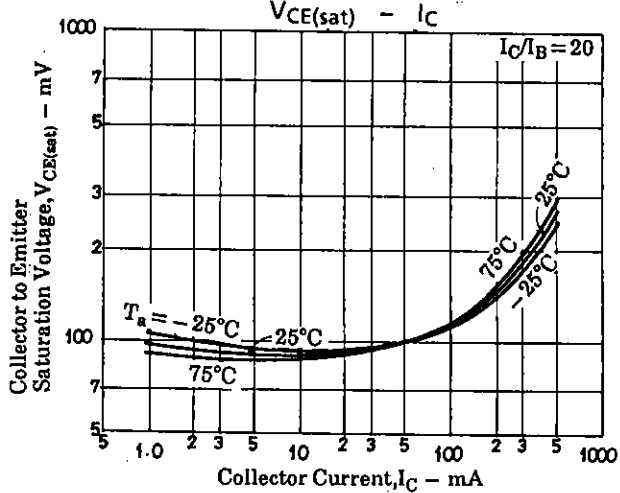
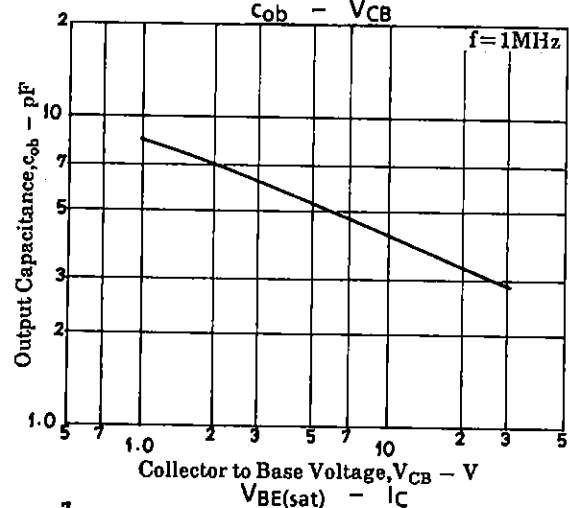
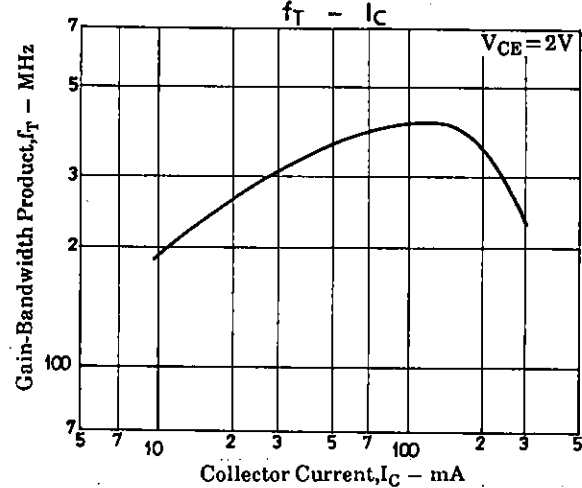
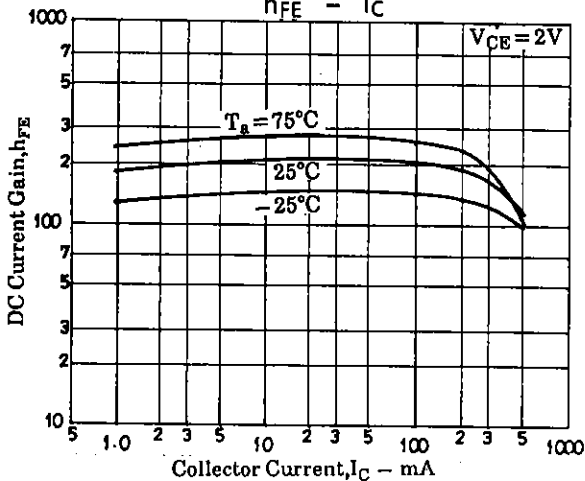
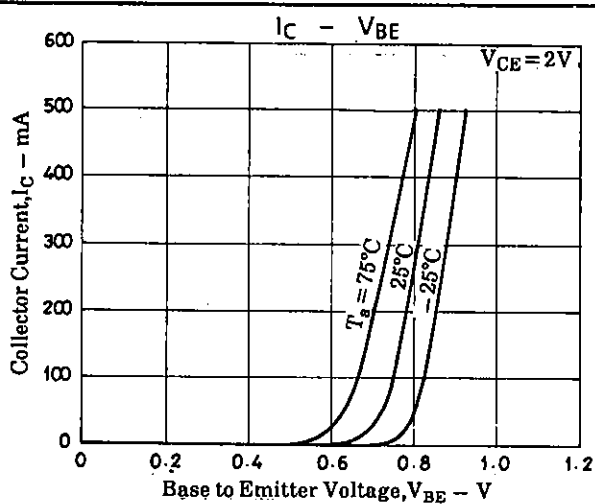
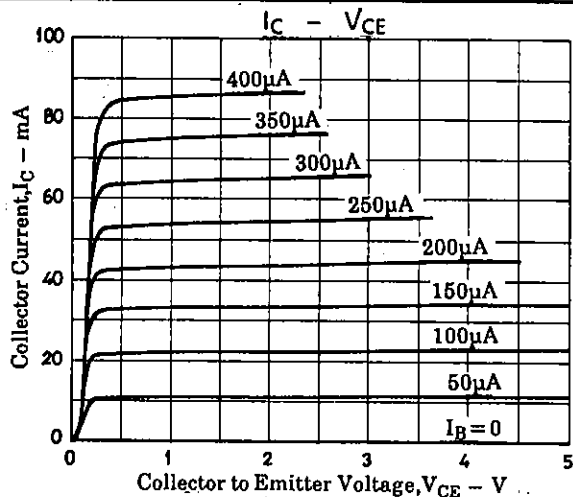
Package Dimensions 2018A
(unit: mm)

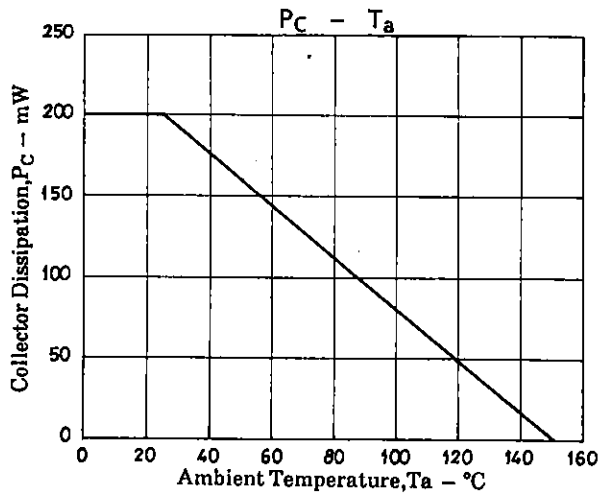


Switching Time Test Circuits



Unit (Resistance : Ω, Capacitance : F)





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