



2SC4523

High-Speed Switching Applications

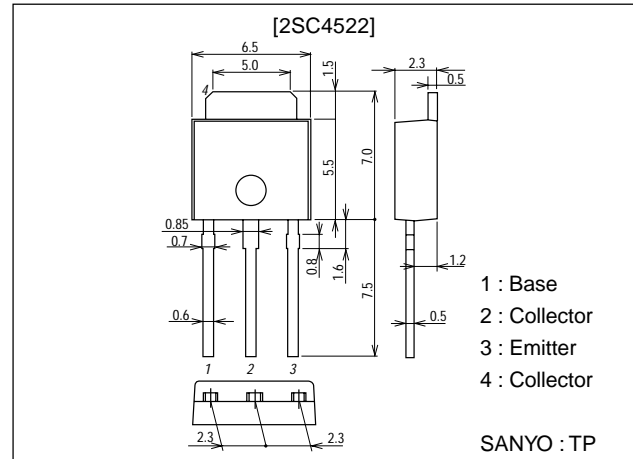
Features

- Adoption of FBET, MBIT process.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.

Package Dimensions

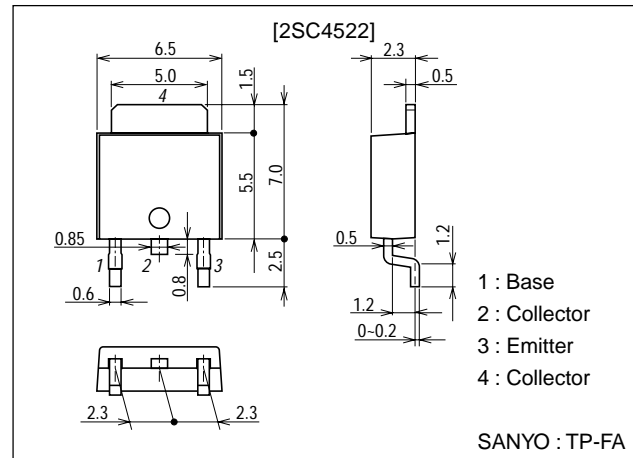
unit:mm

2045B



unit:mm

2044B



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Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	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
		T _c =25°C	15	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

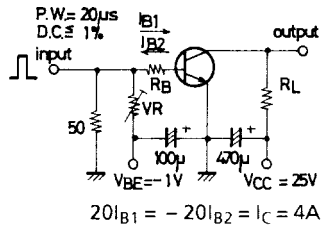
Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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 _{FE1}	V _{CE} =2V, I _C =500mA	100*		400*	
	h _{FE2}	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
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =4A, I _B =200mA		0.25	0.7	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =4A, I _B =200mA		0.95	1.3	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100µA, I _E =0	60			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	45			V
Emitter-to-Base 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}	See specified test circuit.		150	270	ns
Fall Time	t _f	See specified test circuit.		180	350	ns

* : The 2SC4523 is classified by 500mA h_{FE} as follows :

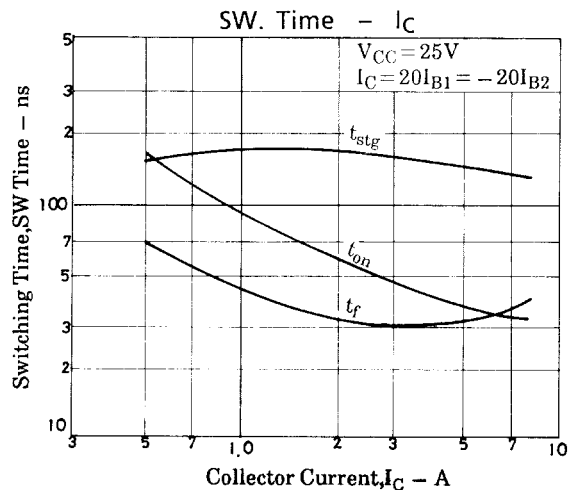
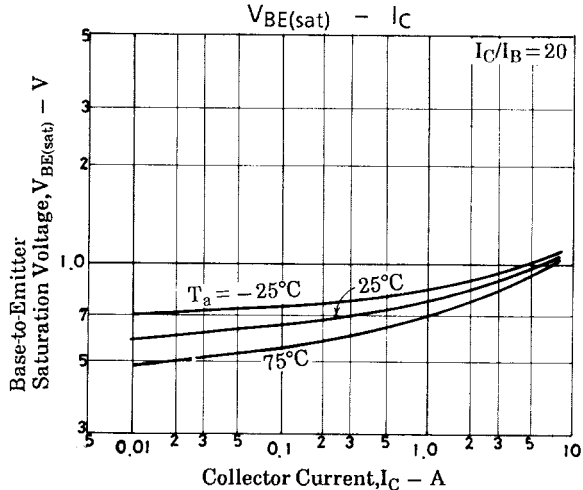
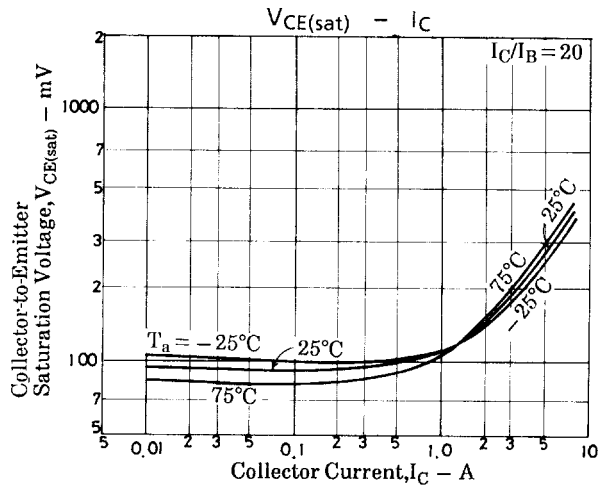
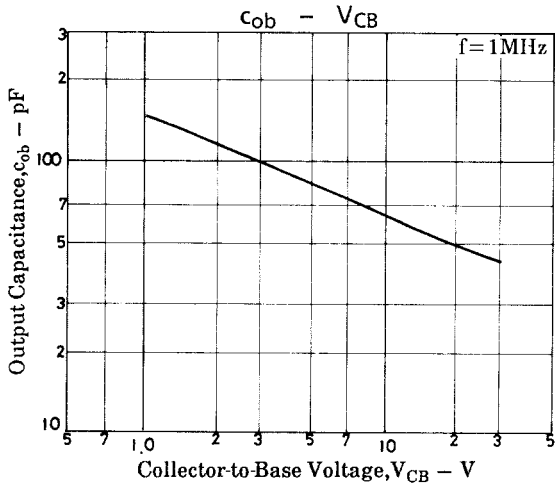
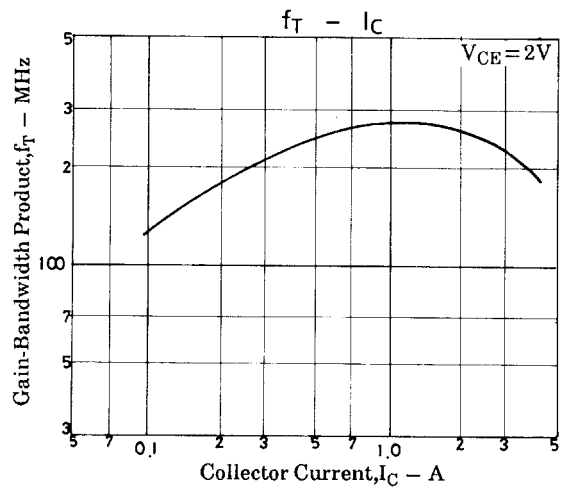
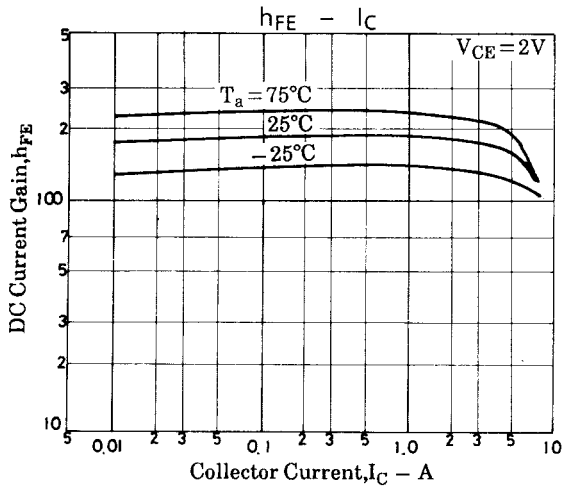
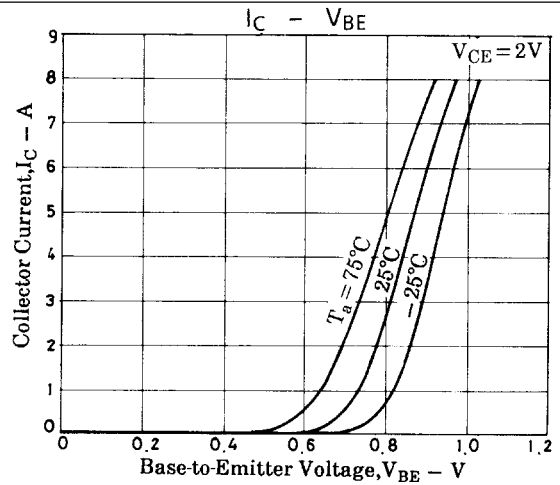
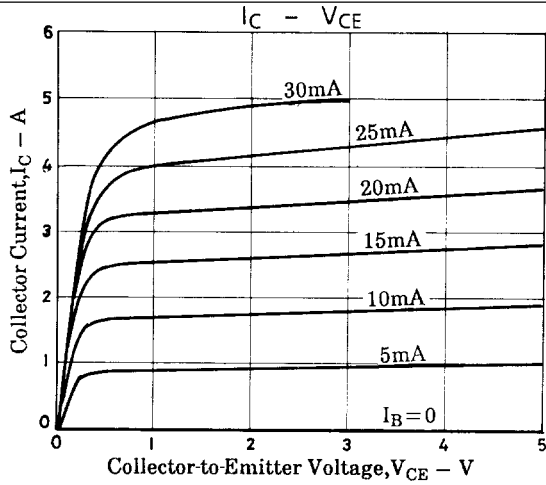
100	R	200	140	S	280	200	T	400
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Switching Time Test Circuit

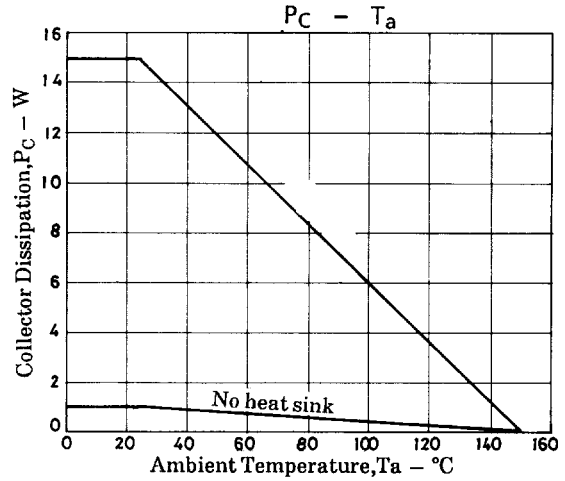
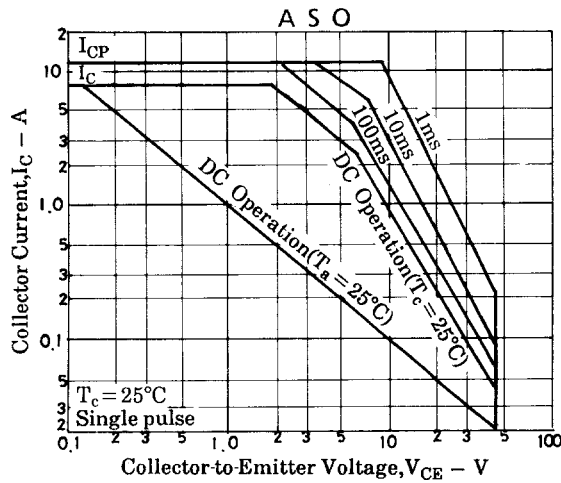


Unit (resistance : Ω, capacitance : F)

2SC4523



2SC4523



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