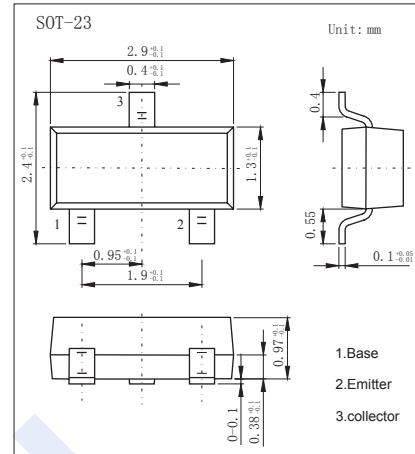


NPN Transistors

2SC4519

■ Features

- Collector Current Capability $I_c=500\text{mA}$
- Collector Emitter Voltage $V_{CE0}=45\text{V}$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	45	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_c	0.5	A
Collector Current - Pulse	I_{CP}	1	
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100\ \mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 1\ \text{mA}$, $I_B = 0$	45			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\ \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 45\ \text{V}$, $I_E = 0$			0.5	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 3\ \text{V}$, $I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 200\text{mA}$, $I_B = 10\text{mA}$			0.45	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 200\text{mA}$, $I_B = 10\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_c = 50\text{mA}$	100		400	
		$V_{CE} = 2\text{V}$, $I_c = 500\text{mA}$	40			
Turn-on time	t_{on}	See specified test circuit			120	ns
Storage time	t_{stg}				270	
Turn-off time	t_{off}				350	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		4		pF
Transition frequency	f_r	$V_{CE} = 2\text{V}$, $I_c = 50\text{mA}$		350		MHz

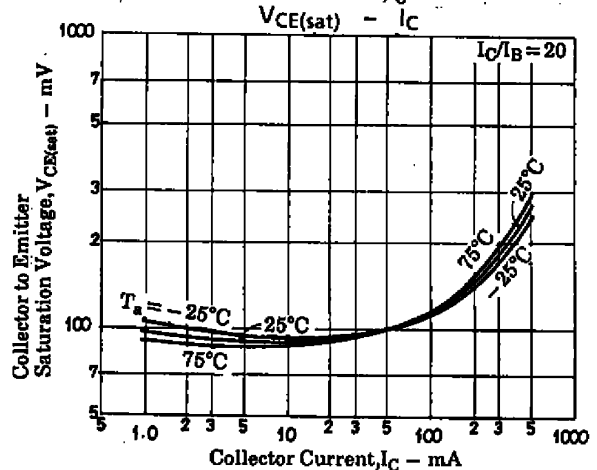
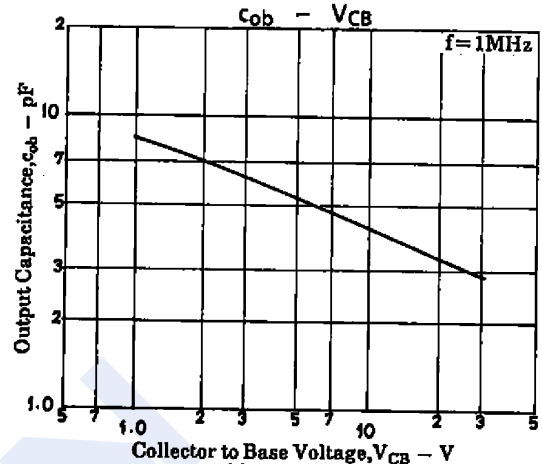
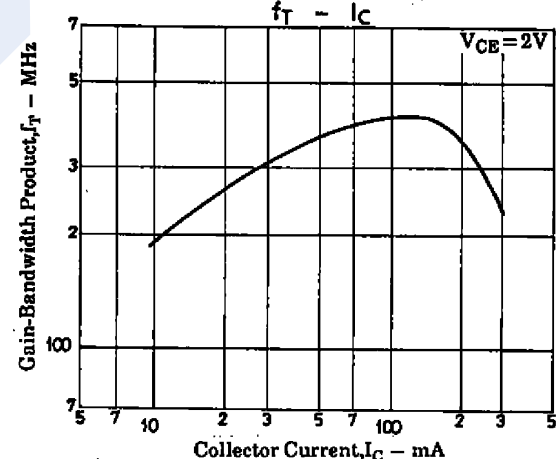
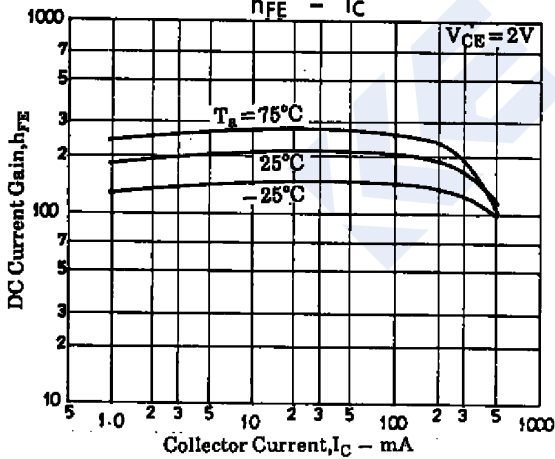
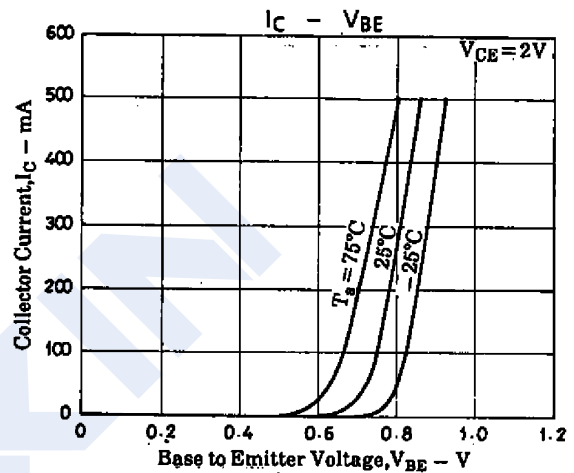
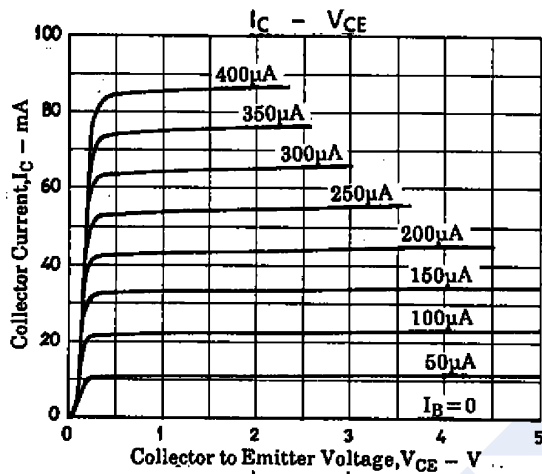
NPN Transistors

2SC4519

■ Classification of $h_{fe}(1)$

Type	2SC4519-TT4	2SC4519-TT5	2SC4519-TT6
Range	100-200	140-280	200-400
Marking	TT4	TT5	TT6

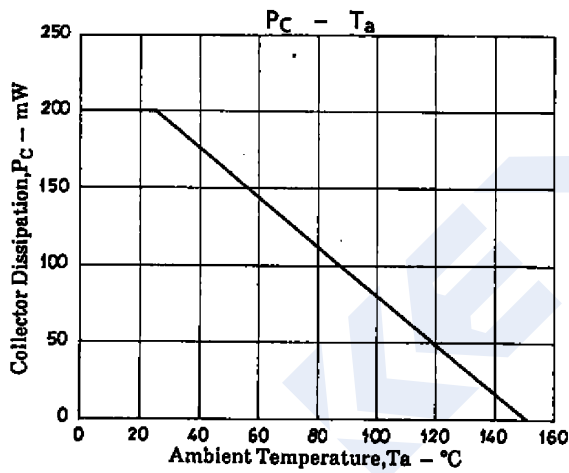
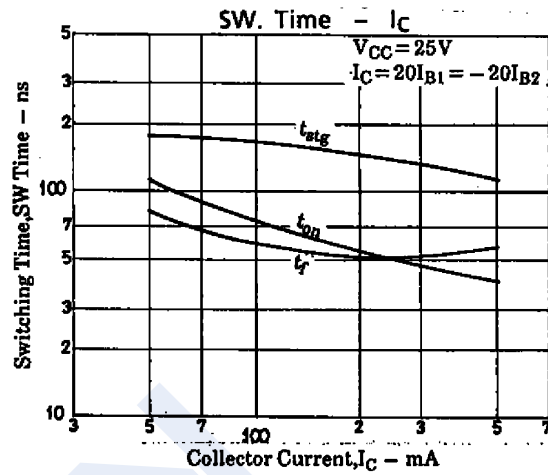
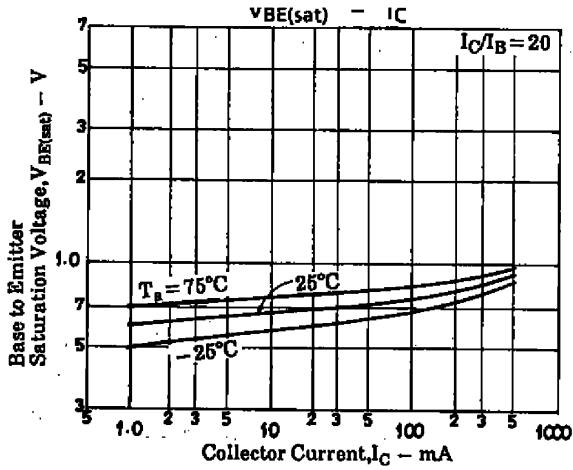
■ Typical Characteristics



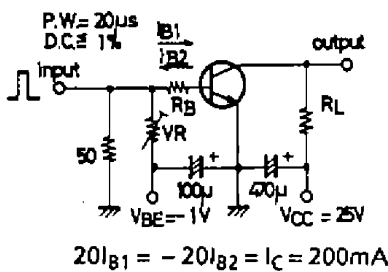
NPN Transistors

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■ Typical Characteristics



Switching Time Test Circuits



Unit (Resistance : Ω, Capacitance : F)