

Silicon NPN Epitaxial Planar Type

2SC4782

■ Features

- High-speed switching.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	25	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	300	mA
Collector current	I_C	200	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

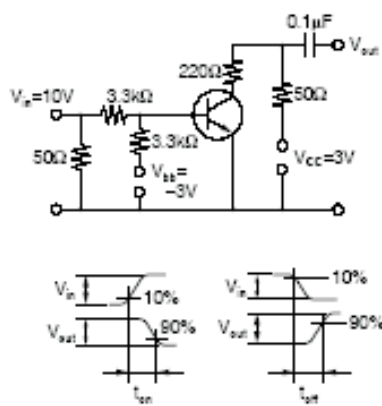
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■ Electrical Characteristics Ta = 25°C

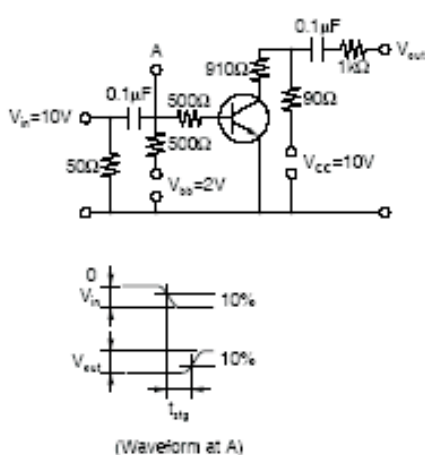
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V _{CB} = 20V, I _E =0			0.1	μA
Emitter cutoff current	IEBO	V _{EB} = 2V, I _C =0			0.1	μA
Forward current transfer ratio	hFE	V _{CE} = 10 V, I _C = 1 mA	40		200	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 10mA , I _B = 1mA		0.17	0.25	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 10mA , I _B = 1mA		0.76	1.0	V
Transition frequency	f _T	V _{CB} = 10 V, I _E = -1 mA, f = 200 MHz	200	500		MHz
Reverse transfer capacitance	C _{re}	V _{CB} = 10 V, I _E = -1 mA, f = 10.7 MHz		2	4	pF
Turn-on time	t _{on}	Refer to the measurement circuit		17		ns
Turn-off time	t _{off}			15		ns
Storage time	t _{stg}			7		ns

Switching time measurement circuit

t_{on}, t_{off} Test Circuit



t_{stg} Test Circuit



■ hFE Classification

Marking	DV		
	P	Q	R
hFE	40~80	60~120	90~200