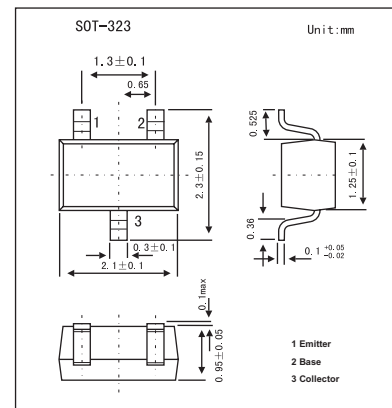


Silicon PNP Epitaxial

2SA1954

■ Features

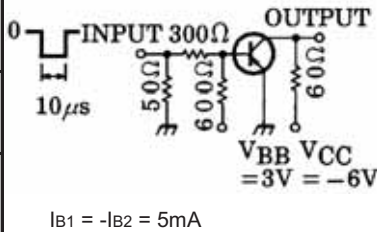
- Low saturation voltage: $V_{CE(sat)}(1) = -15 \text{ mV (typ.)}$
- Large collector current: $I_c = -500 \text{ mA (max)}$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-15	V
Collector-emitter voltage	V_{CE0}	-12	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_c	-500	mA
Base current	I_B	-50	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +125	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	I _{CBO}	V _{CB} = -15 V, I _E = 0			-0.1	μA	
Emitter cut-off current	I _{EBO}	V _{EB} = -5 V, I _C = 0			-0.1	μA	
DC current gain	h _{FE}	V _{CE} = -2 V, I _C = -10 mA	300		1000		
Collector-emitter saturation voltage	V _{CE(sat)(1)}	I _C = -10 mA, I _B = -0.5 mA		-15	-30	mV	
	V _{CE(sat)(2)}	I _C = -200 mA, I _B = -10 mA		-110	-250	mV	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -200 mA, I _B = -10 mA		-0.87	-1.2	V	
Transition frequency	f _T	V _{CE} = -2 V, I _C = -10 mA	80	130		MHz	
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0, f = 1 MHz		4.2		pF	
Collector-emitter on resistance	R _{on}	I _B = -1mA, V _{in} = -1V _{rms} , f = 1KHz		0.9		Ω	
Switching Turn-on time	t _{on}	 <p> INPUT 300Ω 10 μs 50Ω 600Ω OUTPUT 60Ω V_{BB} V_{CC} = 3V = -6V I_{B1} = -I_{B2} = 5mA </p>		40		ns	
Switching Storage time	t _{stg}				280		ns
Switching Fall time	t _f				45		ns

■ hFE Classification

Marking	GA	GB
hFE	300~600	500~1000