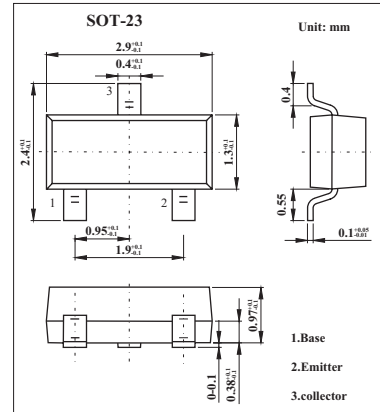


■ Features

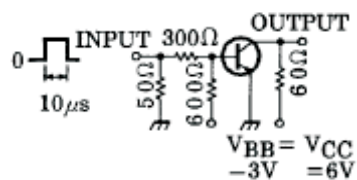
- Low saturation voltage: $V_{CE(sat)}(1) = 15\text{ mV (typ.)}$
@ $I_c = 10\text{ mA}/I_B = 0.5\text{ mA}$
- Large collector current: $I_c = 500\text{ mA (max.)}$



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_c	500	mA
Base current	I_B	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	ICBO	V _{CB} = 15 V, I _E = 0			0.1	μA	
Emitter cut-off current	IEBO	V _{EB} = 5 V, I _C = 0			0.1	μA	
DC current gain	hFE	V _{CE} = 2 V, I _C = 10 mA	300		1000		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 10 mA, I _B = 0.5 mA		15	30	V	
		I _C = 200 mA, I _B = 10 mA		110	250		
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} = 10 V, I _E = 0, f = 1 MHz		4.2		pF	
Collector-emitter on resistance	R _{on}	I _B = 1 mA, V _{in} = 1 V _{rms} , f = 1 kHz		0.9		Ω	
Turn-on time	ton	 <p>Duty cycle ≤ 2%, I_{B1} = -I_{B2} = 5 Ma</p>		85		ns	
Storage time	tstg				170		ns
Fall time	tf				40		ns

■ hFE Classification

Marking	F	
Rank	A	B
hFE	300~600	500~1000