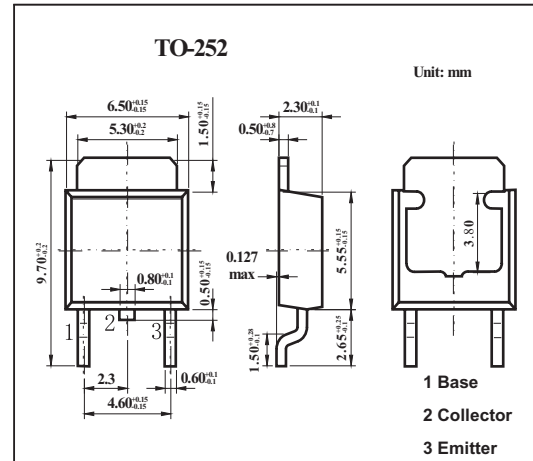


Strobe High-Current Switching Applications

2SB1205

■ Features

- Low saturation voltage.
- Fast switching speed.
- Large current capacity.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-25	V
Collector-emitter voltage	V_{CE0}	-20	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_C	-5	A
Collector current (pulse)	I_{CP}	-8	A
Base current	I_B	-0.5	A
Collector dissipation	P_C	1	W
$T_C = 25^\circ\text{C}$		10	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SB1205

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V _{CB} = -20V, I _E = 0			-500	μA	
Emitter cutoff current	I _{EBO}	V _{EB} = -4V, I _C = 0			-500	μA	
DC current Gain	h _{FE}	V _{CE} = -2V, I _C = -500mA	100		400		
		V _{CE} = -2V, I _C = -4A	60				
Gain bandwidth product	f _T	V _{CE} = -5V, I _C = -200mA		320		MHz	
Output capacitance	C _{ob}	V _{CB} = -10V, f = 1MHz		60		pF	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -3A, I _B = -60mA		-250	-500	mV	
Base-to-emitter saturation voltage	V _{BE(sat)}	I _C = -3A, I _B = -60mA		-1	-1.3	V	
Collector-to-base breakdown voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0	-25			V	
Collector-to-emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} = ∞	-20			V	
Emitter-to-base breakdown voltage	V _{(BR)EBO}	I _E = -10μA, I _C = 0	-5			V	
Turn-on time	t _{on}	<p> PW = 20μs Duty Cycle ≤ 1% IC = -10mA, IB1 = 10mA, IB2 = -2mA Unit (resistance : Ω, capacitance : F) </p>		40		ns	
Storage time	t _{stg}				200		ns
Fall time	t _f				10		ns

■ hFE Classification

Rank	R	S	T
hFE	100~200	140~280	200~400