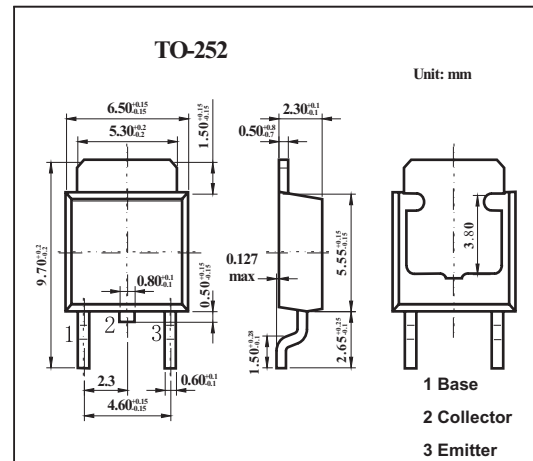


Silicon PNP Triple Diffused Type

2SB1667

■ Features

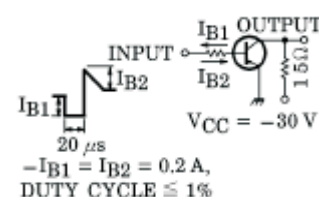
- Low collector saturation voltage.

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage	V_{CB0}	-60	V	
Collector-emitter voltage	V_{CEO}	-60	V	
Emitter-base voltage	V_{EBO}	-7	V	
Collector current	I_C	-3	A	
Base current	I_B	-0.5	A	
Collector power dissipation	P_C	$T_a = 25^\circ\text{C}$	1.5	W
		$T_C = 25^\circ\text{C}$	25	W
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$	

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cut-off current	I_{CBO}	$V_{CB} = -60\text{ V}, I_E = 0$			-100	μA	
Emitter cut-off current	I_{EBO}	$V_{EB} = -7\text{ V}, I_C = 0$			-100	μA	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -50\text{ mA}, I_B = 0$	-60			V	
DC current gain	hFE	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}$	60		300		
		$V_{CE} = -5\text{ V}, I_C = -3\text{ A}$	20				
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3\text{ A}, I_B = -0.3\text{ A}$		-0.5	-1.7	V	
Base-emitter voltage	V_{BE}	$V_{CE} = -5\text{ A}, I_C = -0.5\text{ A}$		-0.7	-1.0	V	
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}$		9		MHz	
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$		150		pF	
Turn-on time	t_{on}	 <p> I_{B1} INPUT I_{B2} OUTPUT $V_{C1} = -30\text{ V}$ $20\ \mu\text{s}$ $-I_{B1} = I_{B2} = 0.2\text{ A}$ DUTY CYCLE $\leq 1\%$ </p>		0.4		μs	
Storage time	t_{stg}				1.7		μs
Fall time	t_f				0.5		μs

■ hFE Classification

Rank	O	Y
hFE	60~120	100~200