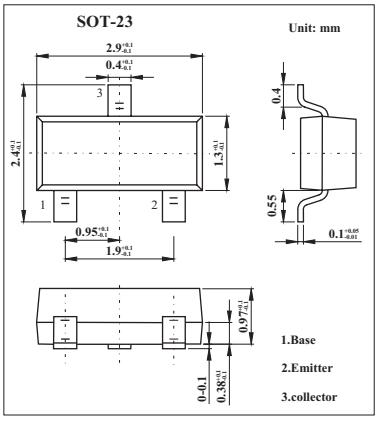
NPN Epitaxial Planar Silicon Transistor

2SC3143



■ Features

- High breakdown voltage.
- Small output capacitance.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	180	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	80	mA
Collector current (pulse)	I_{CP}	150	mA
Collector dissipation	P_C	200	mW
Jumction temperature	T_j	125	℃
Storage temperature	T_{stg}	-55 to +125	℃

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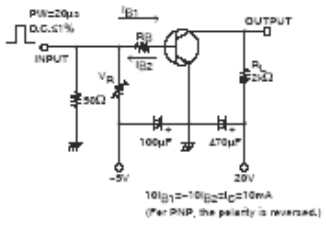
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 120V , I_E = 0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 4V , I_C = 0			0.1	μA
DC current Gain	h_{FE}	V_{CE} = 5V , I_C = 10 mA	60		270	
Gain bandwidth product	f_T	V_{CE} = 10V , I_C = 10 mA		150		MHz
Output capacitance	C_{ob}	V_{CB} = 10V , f = 1MHz		2.0	2.5	pF
Base-emitter voltage	V_{BE}	V_{CE} = 5V , I_C = 10 mA			1.5	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 30mA , I_B = 3mA			0.7	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA , I_E = 0	180			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA , R_{BE} = ∞	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA , I_C = 0	5			V
Turn-on time	t_{on}			0.18		μs
Storage time	t_{stg}			1.0		μs
Fall time	t_f			0.2		μs

■ hFE Classification

Marking	K		
Rank	3	4	5
hFE	60～120	90～180	135～270