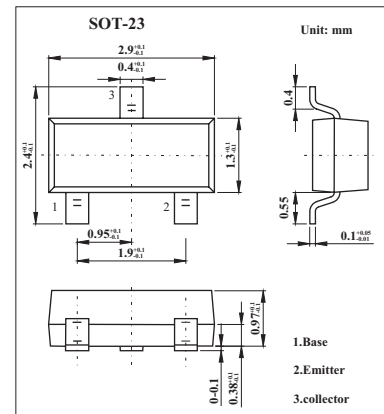


NPN Epitaxial Planar Silicon Transistor

2SC3143

■ Features

- High breakdown voltage.
- Small output capacitance.

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

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
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

2SC3143

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	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