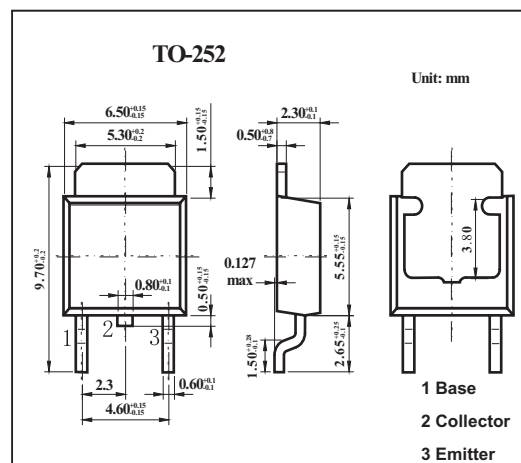


High-Voltage Switching Applications

2SC4135

■ Features

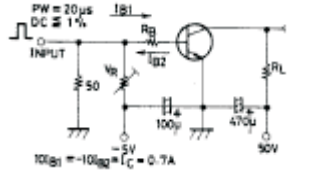
- High breakdown voltage and large current capacity.
- Fast switching speed.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	120	V
Collector-emitter voltage	V_{CE0}	100	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	2	A
Collector current (pulse)	I_{CP}	3	A
Collector dissipation	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SC4135

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V _{CB} = 100V, I _E =0			100	nA
Emitter cutoff current	IEBO	V _{EB} = 4V, I _C =0			100	nA
DC current gain	h _{FE}	V _{CE} = 5V, I _C = 100mA	100		400	
Gain bandwidth product	f _T	V _{CE} = 10V, I _C = 100mA		120		MHz
Output capacitance	C _{ob}	V _{CB} = 10V, f = 1.0MHz		16		pF
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 1A, I _B = 100mA		0.13	0.4	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 1A, I _B = 100mA		0.85	1.2	V
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	120			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	100			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	6			V
Turn-on time	t _{on}	 Unit: (resistance: Ω, capacitance: F) (For PNP, the polarity is reversed.)		80		ns
Storage time	t _{stg}			1000		ns
Fall time	t _f			50		ns

■ h_{FE} Classification

Rank	R	S	T
h _{FE}	100~200	140~280	200~400