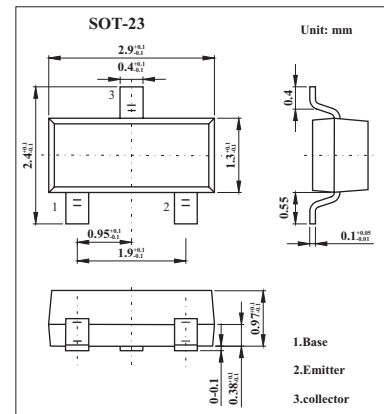


PNP Epitaxial Planar Silicon Transistor

2SA1257

■ Features

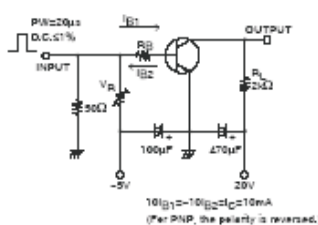
- High breakdown voltage.
- Small output capacitance.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-180	V
Collector-emitter voltage	V_{CE0}	-160	V
Emitter-base voltage	V_{EB0}	-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	$^\circ\text{C}$

2SA1257

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -120\text{V}$, $I_E = 0$			-0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -4\text{V}$, $I_C = 0$			-0.1	μA
DC current Gain	h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$	60		270	
Gain bandwidth product	f_T	$V_{CE} = -10\text{V}$, $I_C = -10\text{mA}$		130		MHz
Output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$		2.4	3.2	pF
Base-emitter voltage	V_{BE}	$V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$			-1.5	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -30\text{mA}$, $I_B = -3\text{mA}$			-0.7	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$, $I_E = 0$	-180			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $R_{BE} = \infty$	-160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}$, $I_C = 0$	-5			V
Turn-on time	t_{on}			0.15		μs
Storage time	t_{stg}			0.95		μs
Fall time	t_f			0.15		μs

■ h_{FE} Classification

Rank	G3	G4	G5
h_{FE}	60~120	90~180	135~270