

2SB1427

Transistors

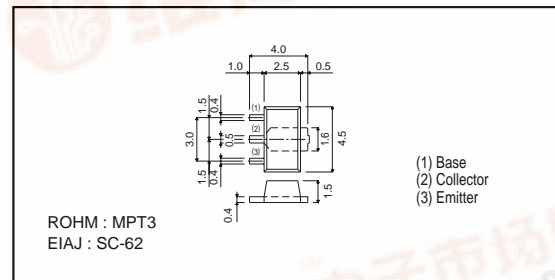
Power transistor (-20V, -2A)

2SB1427

●Features

- 1) Low saturation voltage,
V_{CE}: Max. -0.5V at I_C/I_B = -1A / -50mA.
- 2) Excellent DC current gain characteristics.

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	-20	V
Collector-emitter voltage	V _{CEO}	-20	V
Emitter-base voltage	V _{EB0}	-6	V
Collector current	I _C	-2	A(DC)
		-3	A(Pulse) *1
Collector power dissipation	P _C	0.5	W *2
		2	
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 ~ +150	°C

*1 Single pulse, P_w=10ms

*2 When mounted on a 40×40×0.7mm ceramic board.

●Packaging specifications and h_{FE}

Type	2SB1427
Package	MPT3
h _{FE}	E
Marking	BJ *
Code	T100
Basic ordering unit (pieces)	1000

* Denotes h_{FE}

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-20	-	-	V	I _C = -50μA
Collector-emitter breakdown voltage	BV _{CEO}	-20	-	-	V	I _C = -1mA
Emitter-base breakdown voltage	BV _{EB0}	-6	-	-	V	I _E = -50μA
Collector cutoff current	I _{CB0}	-	-	-0.5	μA	V _{CB} = -16V
Emitter cutoff current	I _{EB0}	-	-	-0.5	μA	V _{EB} = -5V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	-0.5	V	I _C /I _B = -1A/-50mA *
DC current transfer ratio	h _{FE}	390	-	820	-	V _{CE} /I _C = -6V/-0.5A
Transition frequency	f _T	-	90	-	MHz	V _{CE} = -10V, I _E = 10mA, f = 100MHz
Output capacitance	C _{ob}	-	30	-	pF	V _{CB} = -10V, I _E = 0A, f = 1MHz

* Measured using pulse current.

Transistors

●Electrical characteristics curves

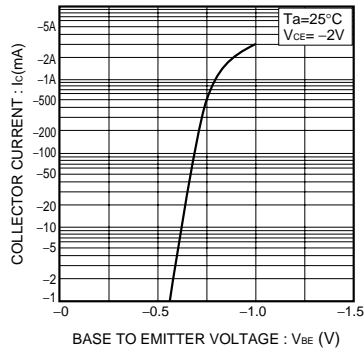


Fig.1 Grounded emitter propagation characteristics

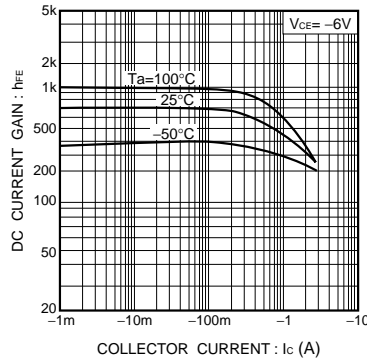


Fig.2 DC current gain vs. collector current

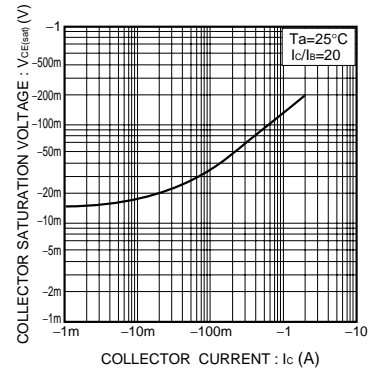


Fig.3 Collector-emitter saturation voltage vs. collector current

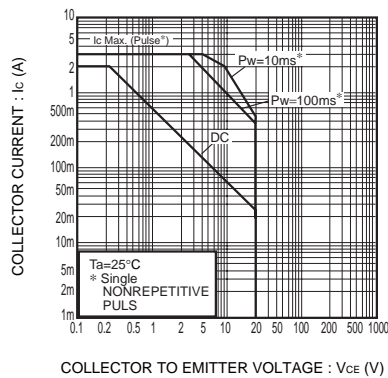


Fig.4 Safe Operating area

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