

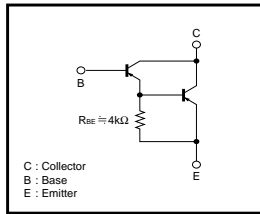
Power transistor (−40V, −2A)

2SB1183 / 2SB1239

●Features

- 1) Darlington connection for high DC current gain.
- 2) Built-in 4kΩ resistor between base and emitter.
- 3) Complements the 2SD1759 / 2SD1861.

●Equivalent circuit

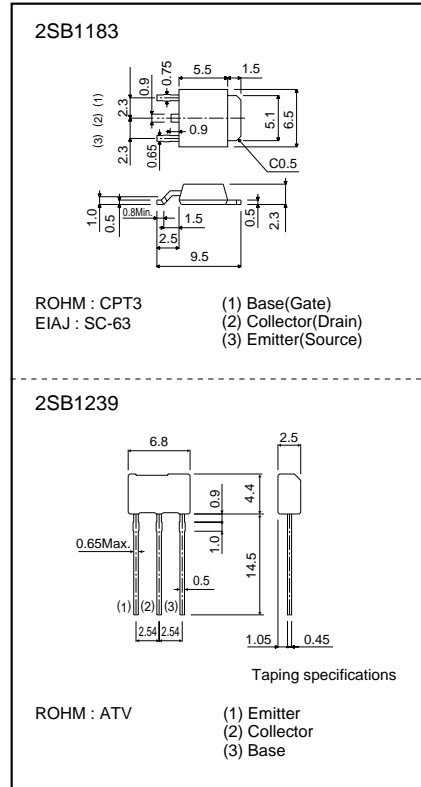


●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	−40	V
Collector-emitter voltage	V _{CER}	−40	V
Emitter-base voltage	V _{EBO}	−5	V
Collector current	I _c	−2	A(DC)
		−3	A(Pulse) *1
Collector power dissipation	P _c	1	W
		10	W(T _c =25°C)
Junction temperature	T _j	150	°C
		−55	°C
Storage temperature	T _{stg}	−55	°C

*1 Single pulse P_w=10ms
*2 Printed circuit board 1.7 mm thick, collector plating 100mm² or larger.

●External dimensions (Units : mm)



●Packaging specifications and hFE

Type	2SB1183	2SB1239
Package	CPT3	ATV
h _{FE}	1k~200k	1k~
Code	TL	T146
Basic ordering unit (pieces)	2500	2500

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	−40	−	−	V	I _c =−50μA
Collector-emitter breakdown voltage	BV _{CER}	−40	−	−	V	I _c =−1mA, R _{SE} =10kΩ
Emitter-base breakdown voltage	BV _{EBO}	−5	−	−	V	I _E =−50μA
Collector cutoff current	I _{cbo}	−	−	−1	μA	V _{CB} =−24V
Emitter cutoff current	I _{EBO}	−	−	−1	μA	V _{EB} =−4V
Collector-emitter saturation voltage	V _{CE(sat)}	−	−	−1.5	V	I _c /I _B =−0.6A/−1.2mA
DC current transfer ratio	h _{FE}	1000	−	20000	−	V _{CE} /I _C =−2V/−0.5A
		1000	−	−	−	
Output capacitance	C _{ob}	−	11	−	pF	V _{CB} =−10V, I _E =0A, f=1MHz