

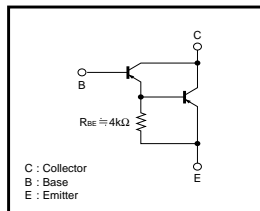
# Power transistor (−40V, −2A)

## 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)

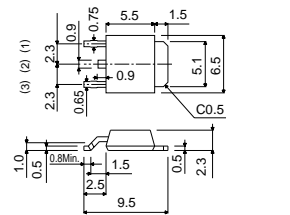
Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	−40	V
Collector-emitter voltage	$V_{CE0}$	−40	V
Emitter-base voltage	$V_{EB0}$	−5	V
Collector current	$I_C$	−2	A(DC)
		−3	A(Pulse) *1
Collector power dissipation	$P_C$	1	W
		10	W(Tc=25°C)
Junction temperature	$T_J$	150	°C
		−55~+150	°C
Storage temperature	$T_{stg}$	−55~+150	°C

\*1 Single pulse  $P_W=10ms$

\*2 Printed circuit board 1.7 mm thick, collector plating 100mm<sup>2</sup> or larger.

### ●External dimensions (Units : mm)

#### 2SB1183

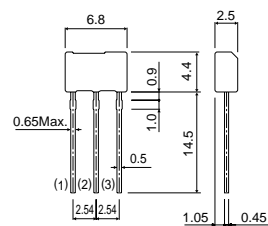


ROHM : CPT3

EIAJ : SC-63

- (1) Base(Gate)  
(2) Collector(Drain)  
(3) Emitter(Source)

#### 2SB1239



ROHM : ATV

- (1) Emitter  
(2) Collector  
(3) Base

### ●Packaging specifications and hFE

Type	2SB1183	2SB1239
Package	CPT3	ATV
hFE	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	$BV_{CBO}$	−40	—	—	V	$I_C=−50\mu A$
Collector-emitter breakdown voltage	$BV_{CE0}$	−40	—	—	V	$I_C=−1mA, R_{BE}=10k\Omega$
Emitter-base breakdown voltage	$BV_{EBO}$	−5	—	—	V	$I_E=−50\mu A$
Collector cutoff current	$I_{CBO}$	—	—	−1	$\mu A$	$V_{CB}=−24V$
Emitter cutoff current	$I_{EBO}$	—	—	−1	$\mu A$	$V_{EB}=−4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	−1.5	V	$I_C/I_E=−0.6A/−1.2mA$
DC current transfer ratio	2SB1183	1000	—	20000	—	$V_{CE}/I_C=−2V/−0.5A$
	2SB1239	1000	—	—	—	
Output capacitance	$C_{ob}$	—	11	—	pF	$V_{CB}=−10V, I_E=0A, f=1MHz$