



## 2SB1142/2SD1682

### 50V/2.5A High-Speed Switching Applications

#### Applications

- Power supplies, relay drivers, lamp drivers.

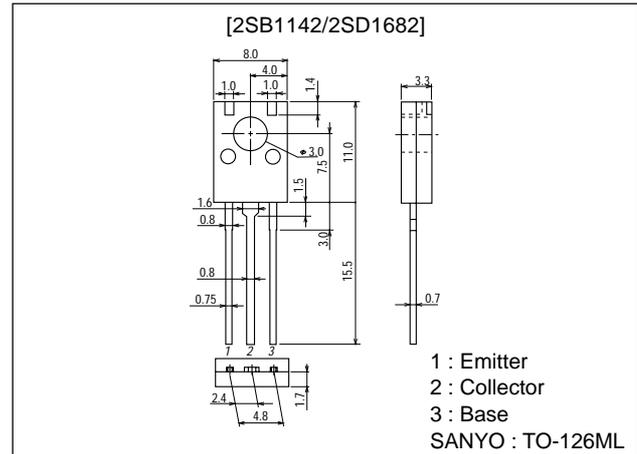
#### Features

- Adoption of FBET, MBIT processes.
- Low saturation voltage.
- Large current capacity and wide ASO.

#### Package Dimensions

unit:mm

2042B



() : 2SB1142

#### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		(-)60	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-)50	V
Emitter-to-Base Voltage	$V_{EBO}$		(-)6	V
Collector Current	$I_C$		(-)2.5	A
Collector Current (Pulse)	$I_{CP}$		(-)5.0	A
Collector Dissipation	$P_C$		1.5	W
		$T_c=25^\circ\text{C}$	10	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)50\text{V}, I_E=0$			(-)100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)4\text{V}, I_C=0$			(-)100	nA

\* : The 2SB1142/2SD1682 are classified by 100mA  $h_{FE}$  as follows :

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2SB1142	Rank	Q	S	T	
	$h_{FE}$	100 to 200	140 to 280	200 to 400	
2SD1682	Rank	R	S	T	U
	$h_{FE}$	100 to 200	140 to 280	200 to 400	280 to 560

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

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