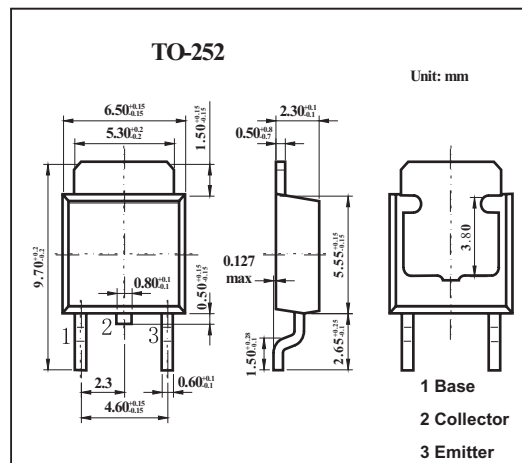


# 2SB1643

### ■ Features

- High collector to emitter  $V_{CE0}$ .
- High collector power dissipation  $P_c$ .



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-60	V
Collector-emitter voltage	$V_{CE0}$	-60	V
Emitter-base voltage	$V_{EB0}$	-6	V
Collector current	$I_c$	-3	A
Peak collector current	$I_{cP}$	-6	A
Base current	$I_B$	-1	A
Collector power dissipation	$P_c$	$T_c = 25^\circ\text{C}$	40
		$T_a = 25^\circ\text{C}$	1.3
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base cutoff current	$I_{CB0}$	$V_{CB} = -60\text{ V}, I_E = 0$			-100	$\mu\text{A}$
Collector-emitter cutoff current	$I_{CE0}$	$V_{EB} = -40\text{ V}, I_C = 0$			-100	$\mu\text{A}$
Emitter-base cutoff current	$I_{EB0}$	$V_{EB} = -6\text{ V}, I_C = 0$			-100	$\mu\text{A}$
Collector-emitter voltage	$V_{CE0}$	$I_C = -25\text{ mA}, I_B = 0$	-60			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -4\text{ V}, I_C = -0.5\text{ A}$	300		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -0.05\text{ A}$			-1	V
Transition frequency	$f_T$	$V_{CE} = -12\text{ V}, I_C = -0.2\text{ A}, f = 10\text{ MHz}$		30		MHz

### ■ $h_{FE}$ Classification

Rank	Q	P
$h_{FE}$	300~500	400~700