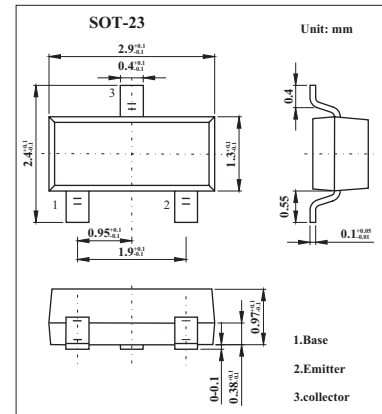


## Silicon NPN Epitaxial

## 2SC2859

## ■ Features

- Excellent hFE linearity : hFE (2) = 25 (min) ( $V_{CE} = 6\text{ V}$ ,  $I_C = 400\text{ mA}$ ).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	35	V
Collector-emitter voltage	$V_{CEO}$	30	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	500	mA
Base current	$I_B$	50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 35\text{ V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V}$ , $I_C = 0$			0.1	$\mu\text{A}$
DC current gain	hFE1	$V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$	70		400	
	hFE2 *	$V_{CE} = 6\text{ V}$ , $I_C = 400\text{ mA}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{ mA}$ , $I_B = 10\text{ mA}$		0.1	0.25	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$		0.8	1.0	V
Transition frequency	$f_T$	$V_{CE} = 6\text{ V}$ , $I_C = 20\text{ mA}$		300		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 6\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$		7		pF

\* hFE 2 classification O: 25 min, Y: 40 min, GR: 70 min

## ■ hFE Classification

Marking	WO	WY	WG
hFE	70~140	120~240	200~400