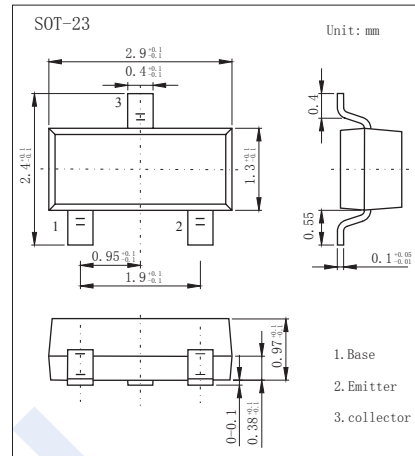


NPN Transistors

2SC2859

■ Features

- Excellent h_{FE} Linearity:
 $h_{FE(2)}=25(\text{min})$ ($V_{CE}=6V, I_C=400\text{mA}$)
- Complementary to 2SA1182

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	35	V
Collector - Emitter Voltage	V_{CE0}	30	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	500	mA
Base Current	I_B	50	
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 125	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}, I_E = 0$	35			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}, I_B = 0$	30			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 35\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		0.1	0.25	V
Base - emitter saturation voltage	$V_{BE(\text{sat})}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 1\text{V}, I_C = 100 \text{ mA}$		0.8	1	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}, I_C = 100 \text{ mA}$	70		400	
		$V_{CE} = 6\text{V}, I_C = 400 \text{ mA}$	O	25		
			Y	40		
		G	70			
Collector output capacitance	C_{ob}	$V_{CB} = 6\text{V}, I_E = 0, f = 1\text{MHz}$		7		pF
Transition frequency	f_T	$V_{CE} = 6\text{V}, I_C = 20 \text{ mA}$		300		MHz

■ Classification of $h_{fe(1)}$

Marking	WO	WY	WG
Rank	O	Y	G(GR)
Range	70-140	120-240	200-400

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■ Typical Characteristics

