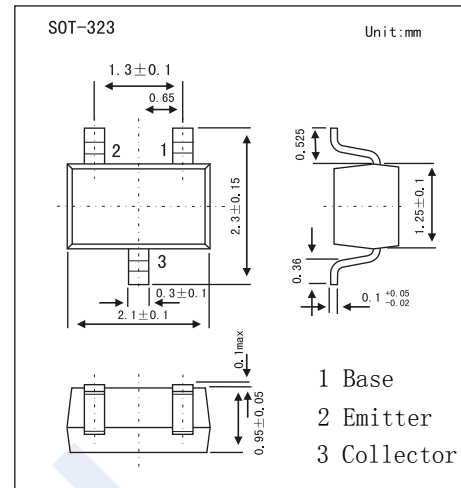


NPN Transistors

2SC4118

■ Features

- Excellent h_{FE} linearity: $h_{FE(2)}=25(\text{min})$
- Complementary to 2SA1588

■ 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	100	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_{CBO}	$V_{CB} = 35\text{V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}$, $I_B = 10 \text{ mA}$		0.1	0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 \text{ mA}$, $I_B = 10 \text{ mA}$			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	
	$h_{FE(2)}$	$V_{CE} = 6\text{V}$, $I_C = 400 \text{ mA}$ 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 $h_{FE(1)}$

Type	2SC4118-O	2SC4118-Y	2SC4118-G
Range	70-140	120-240	200-400
Marking	WO	WY	WG

NPN Transistors

2SC4118

■ Typical Characteristics

