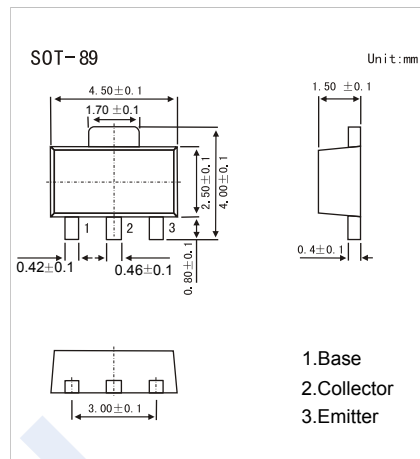


NPN Transistors

2SC4080

■ Features

- High fr.
- High breakdown voltage.
- Complementary to 2SA1575

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	200	V
Collector - Emitter Voltage	V_{CE0}	200	
Emitter - Base Voltage	V_{EB0}	4	
Collector Current - Continuous	I_C	100	mA
Collector Current - Pulse	I_{CP}	200	
Collector Power Dissipation	P_C	500	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu\text{A}, I_E = 0$	200			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}, R_{BE} = \infty$	200			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_C = 0$	4			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 150\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 4\text{V}, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$			1	
DC current gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 10 \text{ mA}$	40		320	
		$V_{CE} = 10\text{V}, I_C = 60 \text{ mA}$	20			
Reverse transfer capacitance	C_{re}	$V_{CB} = 30\text{V}, f = 1 \text{ MHz}$		1.4		pF
Collector output capacitance	C_{ob}	$V_{CB} = 30\text{V}, f = 1 \text{ MHz}$		1.8		
Transition frequency	f_T	$V_{CE} = 30\text{V}, I_C = 30 \text{ mA}$		400		MHz

■ Classification of $h_{FE}(1)$

Type	2SC4080-C	2SC4080-D	2SC4080-E	2SC4080-F
Range	40-80	60-120	100-200	160-320
Marking	CIC	CID	CIE	CIF