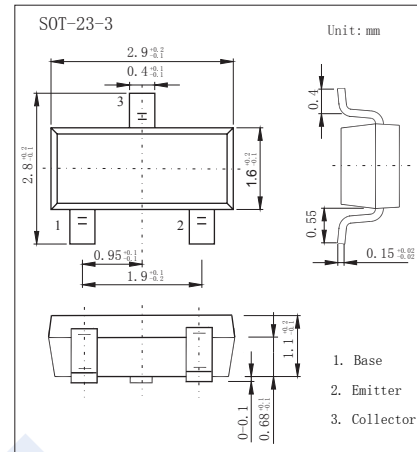


NPN Transistors

CP380

■ Features

- Collector Current Capability $I_C=50\text{mA}$
- Collector Emitter Voltage $V_{CEO}=30\text{V}$

■ 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	
Emitter - Base Voltage	V_{EBO}	4	
Collector Current - Continuous	I_C	50	mA
Collector Power Dissipation	P_C	200	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_{CBO}	$I_C = 100\ \mu\text{A}, I_E = 0$	35			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\ \text{mA}, I_B = 0$	30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\ \mu\text{A}, I_C = 0$	4			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 35\ \text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\ \text{V}, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\ \text{mA}, I_B = 1\ \text{mA}$			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10\ \text{mA}, I_B = 1\ \text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 12\ \text{V}, I_C = 2\ \text{mA}$	70		240	
Collector output capacitance	C_{ob}	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$			3.2	pF
Transition frequency	f_T	$V_{CE} = 10\ \text{V}, I_E = -1\ \text{mA}$	100			MHz

■ Classification of h_{FE}

Type	CP380-O	CP380-Y
Range	70-140	120-240
Marking	380	