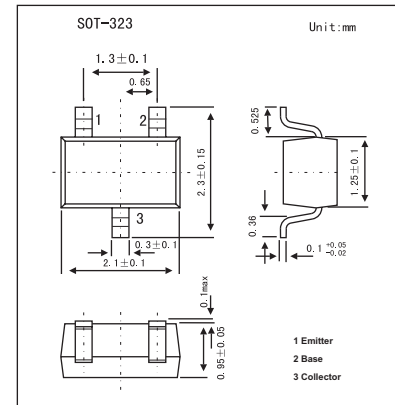


## NPN General Purpose Transistor

## 2PC4081

## ■ Features

- High current (max. 100 mA)
- Low voltage (max. 40 V)

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	50	V
Collector-emitter voltage	$V_{CE0}$	40	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	100	mA
Peak collector current	$I_{CM}$	200	mA
Peak base current	$I_{BM}$	200	mA
Total power dissipation *	$P_{tot}$	200	mW
Storage temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$T_{amb}$	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{th\ j-a}$	625	K/W

\* Transistor mounted on an FR4 printed-circuit board.

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$I_E = 0; V_{CB} = 30\text{ V}$			100	nA
		$I_E = 0; V_{CB} = 30\text{ V}; T_j = 150\text{ }^\circ\text{C}$			5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$I_C = 0; V_{EB} = 4\text{ V}$			100	nA
DC current gain	$h_{FE}$	$I_C = 1\text{ mA}; V_{CE} = 6\text{ V}$	120		270	
2PC4081Q						
2PC4081R						
2PC4081S		270		560		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50\text{ mA}; I_B = 5\text{ mA}; *$			400	mV
Collector capacitance	$C_c$	$I_E = I_C = 0; V_{CB} = 12\text{ V}; f = 1\text{ MHz}$		2	3.5	pF
Transition frequency	$f_T$	$I_C = 2\text{ mA}; V_{CE} = 12\text{ V}; f = 100\text{ MHz}$	100			MHz

\* Pulse test:  $t_p \leq 300\text{ }\mu\text{s}; \delta \leq 0.02$ .

■  $h_{FE}$  Classification

TYPE	2PC4081Q	2PC4081R	2PC4081S
Marking	ZQ	ZR	ZS