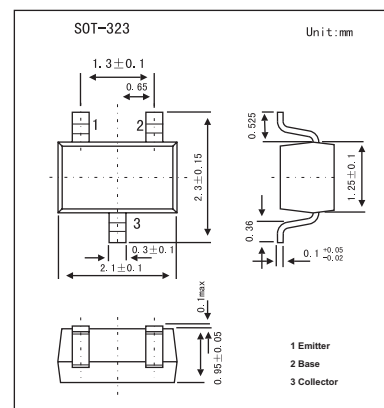


NPN General Purpose Transistor

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	μA
Emitter cut-off current	I_{EBO}	$I_C = 0; V_{EB} = 4\text{ V}$			100	nA
DC current gain 2PC4081Q 2PC4081R 2PC4081S	h_{FE}	$I_C = 1\text{ mA}; V_{CE} = 6\text{ V}$	120 180 270		270 390 560	
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