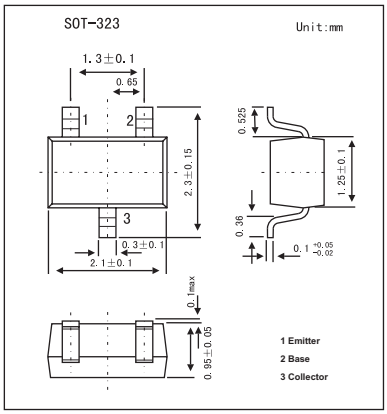
NPN General Purpose Transistor

2PC4081



Features

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

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	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	℃
Junction temperature	T_j	150	℃
Operating ambient temperature	T_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient	$R_{th\ j\text{-}a}$	625	K/W

* Transistor mounted on an FR4 printed-circuit board.

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	I_E = 0; V_{CB} = 30 V			100	nA
		I_E = 0; V_{CB} = 30 V; T_j = 150 ℃			5	μA
Emitter cut-off current	I_{EBO}	I_C = 0; V_{EB} = 4 V			100	nA
DC current gain 2PC4081Q 2PC4081R 2PC4081S	h_{FE}	I_C = 1 mA; V_{CE} = 6 V	 120 180 270		 270 390 560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 50 mA; I_B = 5 mA; *			400	mV
Collector capacitance	C_c	I_E = i_e = 0; V_{CB} = 12 V; f = 1 MHz		2	3.5	pF
Transition frequency	f_T	I_C = 2 mA; V_{CE} = 12 V; f = 100 MHz	100			MHz

* Pulse test: tp ≤ 300 μs; δ ≤ 0.02.

h_{FE} Classification

TYPE	2PC4081Q	2PC4081R	2PC4081S
Marking	ZQ	ZR	ZS