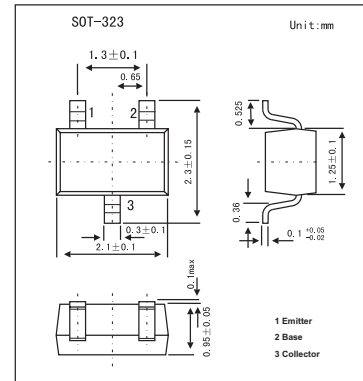
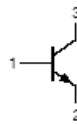


## NPN General Purpose Transistor

## 2PD1820A

## ■ Features

- High current (max. 500 mA).
- Low voltage (max. 50 V).
- Low collector-emitter saturation voltage (max. 600 mV).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	500	mA
Peak collector current	$I_{CM}$	1	A
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

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$I_E = 0; V_{CB} = 20\text{ V}$			10	nA
		$I_E = 0; V_{CB} = 20\text{ V}; T_j = 150\text{ }^\circ\text{C}$			5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$I_C = 0; V_{EB} = 4\text{ V}$			10	nA
DC current gain 2PD1820AQ 2PD1820AR 2PD1820AS	$h_{FE}$	$I_C = 150\text{ mA}; V_{CE} = 10\text{ V}; *$	85		170	
			120		240	
			170		340	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 300\text{ mA}; I_B = 30\text{ mA}; *$			600	mV
Collector capacitance	$C_c$	$I_E = i_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$			15	pF
Transition frequency	$f_T$	$I_C = 50\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz}; *$	150			MHz

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

■  $h_{FE}$  Classification

TYPE	2PD1820AQ	2PD1820AR	2PD1820AS
Marking	AQ	AR	AS