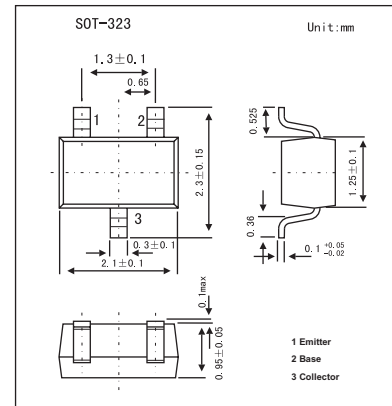
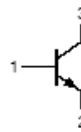


NPN General Purpose Transistor

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	μA
Emitter cut-off current	I_{EBO}	$I_C = 0; V_{EB} = 4\text{ V}$			10	nA
DC current gain	h_{FE}	$I_C = 150\text{ mA}; V_{CE} = 10\text{ V}; *$	2PD1820AQ	85	170	
			2PD1820AR	120	240	
			2PD1820AS	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