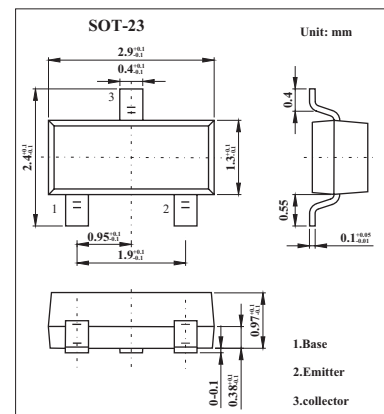


## NPN General Purpose Transistor

## 2PD602A

## ■ Features

- High current (max. 500 mA)
- Low voltage (max. 50 V).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	60	V
Collector-emitter voltage	$V_{CE0}$	50	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current (DC)	$I_C$	500	mA
Peak collector current	$I_{CM}$	1	A
Peak base current	$I_{BM}$	200	mA
Total power dissipation $T_{amb} \leq 25^\circ\text{C}$ ; *	$P_{tot}$	250	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 *	$R_{th\ j-a}$	500	K/W

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

## 2PD602A

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Max	Unit	
Collector cut-off current	I <sub>CBO</sub>	I <sub>E</sub> = 0; V <sub>CB</sub> = 60 V		10	nA	
		I <sub>E</sub> = 0; V <sub>CB</sub> = 60 V; T <sub>j</sub> = 150°C		5	μA	
Emitter cut-off current	I <sub>EBO</sub>	I <sub>C</sub> = 0; V <sub>EB</sub> = 4 V		10	nA	
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 10 V; *	2PD602AQ	85	170	
			2PD602AR	120	240	
			2PD602AS	170	340	
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 10 V; *				
Collector-emitter saturation voltage	V <sub>CEsat</sub>	I <sub>C</sub> = 300 mA; I <sub>B</sub> = 30 mA; *		600	mV	
Collector capacitance	C <sub>c</sub>	I <sub>E</sub> = i <sub>e</sub> = 0; V <sub>CB</sub> = 10 V; f = 1 MHz		15	pF	
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 50 mA; V <sub>CE</sub> = 10 V; f = 100 MHz *	2PD602AQ	140		MHz
			2PD602AR	160		
			2PD602AS	180		

\* Pulse test: t<sub>p</sub> ≤ 300 μs; δ ≤ 0.02.

## ■ Marking

Type Number	2PD602AQ	2PD602AR	2PD602AS
h <sub>FE</sub>	XQ	XR	XS