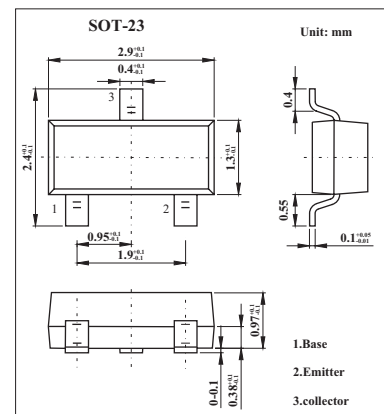


## NPN General Purpose Transistor

## 2PD601A

## ■ Features

- Low current (max. 100 mA)
- Low voltage (max. 50 V).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current (DC)	$I_C$	100	mA
Peak collector current	$I_{CM}$	200	mA
Peak base current	$I_{BM}$	100	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.

## 2PD601A

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	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> = 5 V			10	nA	
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 2 mA; V <sub>CE</sub> = 10 V; *	2PD601AQ	160		260	
			2PD601AR	210		340	
			2PD601AS	290		460	
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 100 mA; V <sub>CE</sub> = 2 V;	90				
Collector-emitter saturation voltage	V <sub>CEsat</sub>	I <sub>C</sub> = 100 mA; I <sub>B</sub> = 10 mA; *			500	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			3.5	pF	
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 2 mA; V <sub>CE</sub> = 10 V; f = 100 MHz *	2PD601AQ	100			MHz
			2PD601AR	120			
			2PD601AS	140			

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

## ■ Marking

Type Number	2PD601AQ	2PD601AR	2PD601AS
Marking	ZQ	ZR	ZS