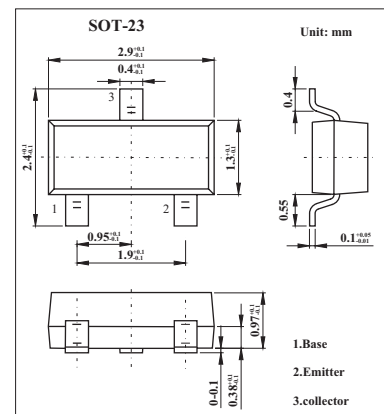


## NPN General Purpose Transistor

## 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       |