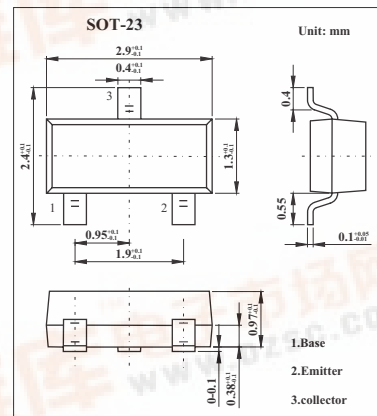


SMD Type Transistors

NPN General Purpose Transistor  
2PD602A

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	60	V
Collector-emitter voltage	V <sub>CE0</sub>	50	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current (DC)	I <sub>C</sub>	500	mA
Peak collector current	I <sub>CM</sub>	1	A
Peak base current	I <sub>BM</sub>	200	mA
Total power dissipation Tamb ≤ 25°C; *	P <sub>tot</sub>	250	mW
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	T <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient *	R <sub>th j-a</sub>	500	K/W

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

## 2PD602A

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

Parameter	Symbol	Testconditons	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:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

### ■ Marking

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