

# General-Purpose Power Transistors

RCA offers a broad range of general-purpose power transistors, including types with hometaxial-base and epitaxial-base construction,

n-p-n and p-n-p types, and complementary pairs, in a variety of package styles including JEDEC TO-3, TO-8, TO-39, TO-66, TO-220 (VERSAWATT), and TO-202 (VERSATAB).

## Features

- High breakdown voltages
- High dissipation capability
- High gain-bandwidth product
- High dc beta at high collector currents
- Full switching-time characterization
- Safe-operating-area (SOA) curves for dc and pulse operation
- Low saturation voltages
- Thermal-cycling ratings

## Applications

- Series and shunt regulators
- Driver and output stages of high-fidelity audio amplifiers
- Power switching circuits such as dc-to-dc converters, low-frequency and high-frequency inverters, choppers, solenoid (hammer) relay drivers
- Servo amplifiers
- Complementary-symmetry audio amplifiers

RCA Family	Comp. Family	Structure	I <sub>C</sub> Max. A	P <sub>T</sub> Max. W	V <sub>CEO</sub> (sus) Range V	V <sub>CE</sub> (sat) Range V	Beta Selection Range		f <sub>T</sub> Min. MHz
							h <sub>FE</sub> Min.	At I <sub>C</sub> A	
2N1482		n-p-n	1.5	5	40-140	0.5-1.4	20-35	0.1-0.45	1.5
2N6670		n-p-n	1.5	12.5	50	—	30	0.4	75
2N1486		n-p-n	3	25	40-55	0.75-12.5	20-35	0.3-0.75	0.8
2N6478		n-p-n	3	50	100-140	0.7-1.2	15-25	0.5-1	0.8
2N3441		n-p-n	3	50	120-150	0.5-1.2	20-25	0.5-1	0.8
2N5786		n-p-n	3.5	10	40-65	0.5-1	20	1-1.6	1
2N5783		p-n-p	3.5	10	40-65	0.5-1	20	1-1.6	8
2N5298		n-p-n	4	36	40-80	0.7-1.2	15-30	0.5-2	0.8
2N3054		n-p-n	4	50	35-80	0.5-1.5	10-80	0.5-1.5	0.8
2N6474	2N6476	n-p-n	4	40	80-120	0.7-1.2	10-50	1.5-3	5
2N6476	2N6474	p-n-p	4	40	80-120	0.7-1.2	10-50	1.5-3	10
2N5954	2N6372	p-n-p	6	40	40-100	0.7-1.2	10-20	1-3	3
2N1490		n-p-n	6	75	40-55	20	15-25	0.8-1.5	1
2N6374	2N5954	n-p-n	7	40	40-120	0.7-1.2	10-20	1-3	3
2N6292	2N6107	n-p-n	7	40	40-100	0.7-1.5	10-50	0.2-5	3
2N6107	2N6292	p-n-p	7	40	25-100	0.5-1.5	10-50	0.2-5	3
2N5496		n-p-n	7	50	40-70	1	20	2.5-3.5	0.8
2N3442		n-p-n	10	150	120-150	0.5-1.2	20-25	0.5-1	0.8
2N6669		n-p-n	10	40	30	1	20	5	10
2N6488	2N6491	n-p-n	15	75	40-100	1-2	15-20	3-5	5
2N6491	2N6488	p-n-p	15	75	40-100	1-2	15-20	3-5	5
2N6472		n-p-n	15	160	40-80	1.3	20	5	4
2N6103		n-p-n	16	75	40-80	1-2.5	15-20	3-8	—
2N3055 Hometaxial		n-p-n	16	150	35-80	0.5-1.5	12-20	4-8	0.8
2N3055	2N6247	n-p-n	16	150	40-80	0.75-1.5	15-50	1-5	2.5
2N3773		n-p-n	16	250	120-150	1-1.4	15	5-8	0.7
2N6247	2N3055	p-n-p	20	160	40-100	1-4	15-50	1-6	10
RCA8638	RCA9116	n-p-n	20	200	100-140	0.8-1.4	15-25	4-10	4
RCA9116	RCA8638	p-n-p	20	200	100-140	0.8-1.4	15-25	4-8	2
2N3771		n-p-n	30	250	40-75	0.8-2	15-35	4-15	—
2N5303		n-p-n	50	200	40-80	0.75-4	12-20	6-15	2
2N5578		n-p-n	80	300	50-70	1.5-2	10	40-60	—

Note: For p-n-p types voltages and currents are negative.

## Silicon Diacs (Bidirectional Trigger Diodes)

Type	I <sub>peak</sub> Pulse A	Breakover Volts V <sub>BR</sub> (V)		Breakback Volts ( ΔV ± ) V min.
		•	#	
D3202Y	2	29, 35	± 3 max	9
D3202U	2	25, 40	± 3 max	9

• Forward or Reverse (min, max) #Symmetry

**Features:** • Plastic-packaged, two-terminal, axial-lead trigger devices • Breakover voltage (V<sub>BO</sub>): 32 V typ. • Low breakover current (I<sub>BO</sub>): 25 μA max.

**Applications:** In thyristor phase-control circuits for lamp-dimming, universal motor speed controls, and heat controls.