

# RF Power Transistors

A wide variety of rf types capable of handling a broad range of power from hf to microwave frequencies (25 W at 30 MHz to 1 W at 1 GHz), supplied in JEDEC TO-5, TO-39, TO-39 with flange, TO-60, and TO-72 packages.

## Features

- High gain-bandwidth product ( $f_T$ ): 1000 MHz
- High power gain ( $G_p$ ): 17 dB min. at 200 MHz, 12.5 dB min. at 450 MHz, 7 dB min. at 470 MHz
- Low noise factor (NF): 3.4 dB at 450 MHz
- High power output ( $P_O$ ): 24 W at 76 MHz, 9 dB gain min., 1 W at 1 GHz

## Applications

- HF, vhf, uhf, microwave frequencies
- Fuse and sonde oscillators
- L- and S-band radar and telemetry
- VHF mobile, marine, ECM, sonobuoy
- Beacons
- Commercial and military aircraft
- TV tuners, FM and AM front-ends
- High-reliability and radiation-tolerant versions available for critical applications in aerospace, military, and industrial equipment

Class of Service	Type	Operating Frequency MHz	P <sub>OUT</sub> Min. W	V <sub>CC</sub> V	P <sub>G</sub> Min. dB
Microwave	41024	1 GHz	1	28	6-12.4
VHF and UHF Mobile Radio	40280, 40340, 40341, 40964, 40965 2N4427, 2N4932, 2N4933, 2N5913	50-470	0.4-30	12-24	6-12.4
Aircraft Radio	40290, 40291, 40292, 2N5102	118-136	2-15	12.5-24	4-6
Single Sideband and Military Communications	40936, 2N2876, 2N3229, 2N3375 2N3553, 2N3632, 2N3866 2N3866A, 2N4440, 2N5070, 2N5071	30-400	1-25	12.5-28	9-13
CATV, MATV, and Small-Signal, Low-Noise	40608, 40894, 40895, 40896, 40897, 2N2857, 2N3478, 2N3839, 2N3600, 2N5109, 2N5179	60-890	N.F. = 3-6 dB typ. V <sub>CE</sub> = 6-15 V		11-18
General Purpose	2N3733, 2N4012, 2N5090, 2N5180	200-1000	1.2-10	10-28	

# Silicon Rectifiers

RCA offers two basic families of silicon rectifiers, standard and fast-recovery types, consisting of more than 70 device types. The types in each family differ in repetitive-peak-reverse-voltage ratings ( $V_{RRM}$ ). Types are available in JEDEC stud-mounted DO-4 and DO-5 packages, and in reverse-polarity versions.

## Features

- Low leakage currents
- High output current
- Low voltage drop
- Fast recovery times
- Low-thermal-resistance hermetic packages

## Applications

- For medium- and high-current applications in commercial, industrial, and military power supplies

RCA Family	Forward Current				V <sub>RRM</sub> Range V	Voltage Drop		Reverse Recovery Time*		
	I <sub>F</sub> RMS A	I <sub>F</sub> AVG A	I <sub>FSM</sub> Surge A	T <sub>A</sub> °C		V <sub>F</sub> V	I <sub>O</sub> A	t <sub>rr</sub> μs	I <sub>FM</sub> A	T <sub>C</sub> °C
<b>Standard Types</b>										
1N1341B-1N1348B <sup>Δ</sup>	—	6	160	150	50-600	0.65	6	—	—	—
1N1199A-1N1206A <sup>Δ</sup>	—	12	240	150	50-600	0.55	12	—	—	—
1N248C-1N250C <sup>□</sup>	—	20	350	150	50-600	0.6	20	—	—	—
1N1195A-1N1198A <sup>□</sup>	—	20	350	150	50-600	0.6	20	—	—	—
1N1183A-1N1190A <sup>Δ</sup>	—	40	800	150	50-600	0.65	40	—	—	—
<b>Fast-Recovery Types</b>										
D2406F-D2406M <sup>#</sup>	9	6	125	100	50-600	1.4	6	0.35	19	25
1N3879-1N3883 <sup>##</sup>	9	6	75	100	50-400	1.4	6	0.2	1	25
D2412F-D2412M <sup>#</sup>	18	12	250	100	50-600	1.4	12	0.35	38	25
1N3889-1N3893 <sup>##</sup>	18	12	150	100	50-400	1.4	12	0.2	1	25
D2520F-D2520M <sup>##</sup>	30	20	300	100	50-600	1.4	20	0.35	63	25
1N3899-1N3903 <sup>##</sup>	30	20	225	100	50-400	1.4	20	0.2	1	25
1N3909-1N3913 <sup>##</sup>	45	30	300	100	50-400	1.4	30	0.2	1	25
D2540F-D2540M <sup>#</sup>	60	40	700	165	50-600	1.8	100	0.35	125	25

<sup>Δ</sup> At full cycle average      T<sub>A</sub> Operating-Temperature Range: <sup>Δ</sup> - 65 to + 200    <sup>□</sup> - 65 to + 175  
<sup>•</sup> T<sub>A</sub> = 25 °C    <sup>#</sup> - 40 to + 150    <sup>##</sup> - 65 to + 150