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_{OUT} Min. W	V_{CC} V	P_G 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_{CE} = 6-15 V		11-18
General Purpose	2N3733, 2N4012, 2N5090, 2N5180	200-1000	1.2-10	10-28	

Datasheet.Directory

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 I_F RMS A	Forward Current I_F AVG A	Forward Current I_{FSM} Surge A	Forward Current T_A °C	V_{RRM} Range V	Voltage Drop V_F■ V	Voltage Drop I_O A	Reverse Recovery Time• t_{rr} µs	Reverse Recovery Time• I_{FM} A	Reverse Recovery Time• T_C °C
Standard Types										
1N1341B-1N1348B△	—	6	160	150	50-600	0.65	6	—	—	—
1N1199A-1N1206A△	—	12	240	150	50-600	0.55	12	—	—	—
1N248C-1N250C□	—	20	350	150	50-600	0.6	20	—	—	—
1N1195A-1N1198A□	—	20	350	150	50-600	0.6	20	—	—	—
1N1183A-1N1190A△	—	40	800	150	50-600	0.65	40	—	—	—
Fast-Recovery Types										
D2406F-D2406M#	9	6	125	100	50-600	1.4	6	0.35	19	25
1N3879-1N3883##	9	6	75	100	50-400	1.4	6	0.2	1	25
D2412F-D2412M#	18	12	250	100	50-600	1.4	12	0.35	38	25
1N3889-1N3893##	18	12	150	100	50-400	1.4	12	0.2	1	25
D2520F-D2520M##	30	20	300	100	50-600	1.4	20	0.35	63	25
1N3899-1N3903##	30	20	225	100	50-400	1.4	20	0.2	1	25
1N3909-1N3913##	45	30	300	100	50-400	1.4	30	0.2	1	25
D2540F-D2540M#	60	40	700	165	50-600	1.8	100	0.35	125	25

■ At full cycle average
• T_A = 25 °C

T_A Operating-Temperature Range: △ −65 to +200 □ −65 to +175 # −40 to +150 ## −65 to +150