

# Medium Power Amplifiers and Switches

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H <sub>FE</sub>				V <sub>CE(SAT)</sub>		f <sub>T</sub> min (MHz)	Cob max (pF)	COMPLEMENTARY TYPE
			P <sub>d</sub> (mW)	I <sub>C</sub> (A)	V <sub>CEO</sub> (V)	min	max	I <sub>C</sub> (mA)	V <sub>CE</sub> (V)	max (V)	I <sub>C</sub> (A)			
PN3643	N	TO-92A	600	0.5	30	100	300	150	10	0.22	0.15	250	8	-
PN3644	P	TO-92A	600	0.5	45	100	300	150	10	0.4	0.15	200	8	-
PN3645	P	TO-92A	600	0.5	60	100	300	150	10	0.4	0.15	200	8	-
PN4355	P	TO-92A	600	0.5	60	100	400	10	10	1	1	100	30	-
PN4356	P	TO-92A	600	0.5	80	50	250	10	10	0.5	0.5	100	30	-
TN1613	N	TO-237A	2000▲	0.5	50●	40	120	150	10	1.5	0.15	60	25	-
TN1711	N	TO-237A	2000▲	1	50●	100	300	150	10	1.5	0.15	70	25	-
TN2102	N	TO-237A	2000▲	1	65	40	120	150	10	0.5	0.15	60	10	TN4036
TN2219	N	TO-237A	2000▲	0.8	30	100	300	150	10	0.4	0.15	250	8	-
TN2219A	N	TO-237A	2000▲	0.8	40	100	300	150	10	1	0.5	250	8	-
TN2905	P	TO-237A	2000▲	0.6	40	100	300	150	10	1.6	0.5	200	8	-
TN2905A	P	TO-237A	2000▲	0.6	60	100	300	150	10	1.6	0.5	200	8	-
TN3019	N	TO-237A	2000▲	1	80	100	300	150	10	0.5	0.5	100	12	TN4033
TN3020	N	TO-237A	2000▲	1	80	40	120	150	10	0.5	0.5	80	12	TN4031
TN3053	N	TO-237A	2000▲	0.7	40	50	250	150	10	1.4	0.15	100	15	TN4037
TN4030	P	TO-237A	2000▲	1	60	40	120	100	5	1	1	100	20	-
TN4031	P	TO-237A	2000▲	1	80	40	120	100	5	1	1	100	20	TN3020
TN4032	P	TO-237A	2000▲	1	60	100	300	100	5	1	1	150	20	-
TN4033	P	TO-237A	2000▲	1	80	100	300	100	5	1	1	150	20	TN3019
TN4036	P	TO-237A	2000▲	1	65	40	120	150	10	0.65	0.15	60	30	TN2102
TN4037	P	TO-237A	2000▲	1	40	50	250	150	10	1.4	0.15	60	30	TN3053
2N656	N	TO-39	800	0.6	60	30	90	200	10	4	0.2	40	20	-
2N697	N	TO-39	600	0.5	40●	40	120	150	10	1.5	0.15	50	35	-
2N699	N	TO-39	600	1	80●	40	120	150	10	5	0.15	50	20	-
2N699A	N	TO-39	800	1	80●	40	120	150	10	5	0.15	50	20	-
2N699B	N	TO-39	800	1	80●	40	120	150	10	5	0.15	60	15	-
2N718	N	TO-18	400	0.5	40●	40	120	150	10	1.5	0.15	50	25	-
2N718A	N	TO-18	500	0.5	50●	40	120	150	10	1.5	0.15	60	25	-
2N720A	N	TO-18	500	1	80	40	120	150	10	5	0.15	50	15	-
2N721	P	TO-18	400	0.5	35	20	45	150	10	1.5	0.15	50	45	-
2N911	N	TO-18	500	0.5	60	35	-	10	10	1.2	0.05	50	15	-
2N956	N	TO-18	500	0.5	50●	100	300	150	10	1.5	0.15	70	25	-
2N1132	P	TO-39	600	0.6	35	30	90	150	10	1.5	0.15	60	45	-
2N1420	N	TO-39	600	1	30●	100	300	150	10	1.5	0.15	50	35	-
2N1507	N	TO-39	600	1	30●	100	300	150	10	1.5	0.15	50	35	-
2N1566	N	TO-39	600	0.1	60	80	200	5	5	1	0.01	60	10	-
2N1613	N	TO-39	800	0.5	50●	40	120	150	10	1.5	0.15	60	25	-
2N1613A	N	TO-39	1000	0.5	50●	40	120	150	10	1	0.15	60	25	-
2N1613B	N	TO-39	1000	0.5	55●	40	120	150	10	0.2	0.15	60	10	-
2N1711	N	TO-39	800	1	50●	100	300	150	10	1.5	0.15	770	25	-
2N1711A	N	TO-39	1000	1	50●	100	300	150	10	1	0.15	70	25	-
2N1711B	N	TO-39	1000	1	55●	100	300	150	10	0.2	0.15	70	10	-
2N1889	N	TO-39	800	1	60	40	120	150	10	5	0.15	60	15	-
2N1890	N	TO-39	800	1	60	100	300	150	10	5	0.15	60	15	-
2N1893	N	TO-39	800	0.5	80	40	120	150	10	5	0.15	50	15	-
2N1973	N	TO-39	800	1	80●	75	-	10	10	1.2	0.05	60	15	-
2N1974	N	TO-39	800	1	80●	35	-	10	10	1.2	0.05	50	15	-
2N1975	N	TO-39	800	1	80	15	-	10	10	1.2	0.05	40	15	-
2N1983	N	TO-39	600	1	25	80	240	5	5	0.25	0.055	40	45	-
2N1984	N	TO-39	600	1	25	40	120	5	5	0.25	0.005	40	45	-
2N1985	N	TO-39	600	1	25	20	80	5	5	-	-	40	45	-
2N1986	N	TO-39	600	0.3	25	60	240	150	10	1.5	0.15	40	35	-
2N1987	N	TO-39	600	0.3	25	20	80	150	10	1.5	0.15	40	35	-
2N1988	N	TO-39	600	1	45	35	120	30	10	2	0.03	40	20	-
2N1989	N	TO-39	600	1	45	20	60	30	10	2	0.03	40	20	-

▲T<sub>c</sub>= 25°C + Typical value ●V<sub>CE</sub>R