

# Small Signal Transistors

## TO-39 Case



TYPE NO.	DESCRIPTION	V <sub>CBO</sub> (V)	V <sub>CEO</sub> (V) *V <sub>CER</sub>	V <sub>EBO</sub> (V)	I <sub>CBO</sub> @ (μA) *I <sub>CEO</sub> **I <sub>CES</sub> ***I <sub>CEV</sub> ****I <sub>CER</sub>	V <sub>CB</sub> (V)	h <sub>FE</sub>		@ I <sub>C</sub> (mA)	@ V <sub>CE</sub> (V)	V <sub>CE(SAT)</sub> (V)	@ I <sub>C</sub> (mA)	f <sub>T</sub> (MHz) *TYP	C <sub>ob</sub> (pF) *TYP	t <sub>on</sub> (ns) *TYP	t <sub>off</sub> (ns) *TYP	NF (dB) *TYP
		MIN	MIN	MIN			MIN	MAX			MAX		MIN	MAX	MAX	MAX	MAX
2N656A	NPN AMPL/SWITCH	60	60	6.0	10	30	30	90	200	10	2.00	200	50	20	--	--	--
2N657A	NPN AMPL/SWITCH	100	100	6.0	10	30	30	90	200	10	2.00	200	50	20	--	--	--
2N696	NPN AMPL/SWITCH	60	40	5.0	1.00	30	20	60	150	10	1.50	150	80	35	--	--	--
2N697A	NPN AMPL/SWITCH	60	35	5.0	1.00	30	40	120	150	10	1.50	150	50	35	--	--	--
2N698	NPN AMPL/SWITCH	120	60	7.0	0.05	75	20	60	150	10	1.50	150	50	15	--	--	--
2N699B	NPN AMPL/SWITCH	120	80	7.0	0.01	90	40	120	150	10	1.30	150	60	15	--	--	--
2N1052	NPN HIGH VOLTAGE	200	155	6.0	10	200	20	80	200	6.0	5.00	200	8.0	50	--	--	--
2N1053	NPN AMPL/SWITCH	180	135	6.0	10	180	20	80	200	6.0	5.00	200	8.0	50	--	--	--
2N1054	NPN AMPL/SWITCH	125	115	6.0	5.00	125	20	--	200	6.0	4.00	200	8.0	50	--	--	--
2N1055	NPN AMPL/SWITCH	100	100	6.0	15	100	20	80	50	6.0	2.00	50	3.0	--	--	--	--
2N1116	NPN AMPL/SWITCH	60	60	6.0	15	60	40	150	500	6.0	5.00	500	6.0	80	--	--	--
2N1117	NPN AMPL/SWITCH	60	60	6.0	15	60	40	150	200	6.0	4.00	200	4.0	--	--	--	--
2N1118	PNP AMPL/SWITCH	25	25	6.0	1.00	25	15	--	1.0	6.0	--	--	--	12	--	--	--
2N1119	PNP AMPL/SWITCH	10	10	6.0	0.10	10	15	--	15	0.5	0.15	5.0	--	12	--	--	--
2N1131	PNP AMPL/SWITCH	50	35	5.0	100	50	20	45	150	10	1.50	150	50	45	--	--	--
2N1131A	PNP AMPL/SWITCH	60	40	5.0	0.50	45	20	45	150	10	1.50	150	90	45	--	--	--
2N1132B	PNP AMPL/SWITCH	70	50	6.0	0.10	50	30	75	150	10	1.50	150	90	30	--	--	--
2N1258	PNP AMPL/SWITCH	30	30	5.0	0.20	20	75	150	10	1.0	0.60	10	--	10	--	--	--
2N1259	PNP AMPL/SWITCH	50	50	5.0	0.20	30	25	100	10	1.0	0.30	10	--	10	--	--	--
2N1420	NPN AMPL/SWITCH	60	30	5.0	1.00	30	100	300	150	10	1.50	150	50	35	--	--	--
2N1445	NPN AMPL/SWITCH	120	120	6.0	10	120	20	80	200	10	4.00	200	--	--	--	--	--
2N1479	NPN AMPL/SWITCH	60	40	6.0	10	30	20	60	200	4.0	1.40	200	1.5	--	--	--	--
2N1480	NPN AMPL/SWITCH	100	55	6.0	10	30	20	60	200	4.0	1.40	200	1.5	--	--	--	--
2N1481	NPN AMPL/SWITCH	60	40	6.0	10	30	35	100	200	4.0	1.40	200	1.5	--	--	--	--
2N1482	NPN AMPL/SWITCH	100	55	6.0	10	30	35	100	200	4.0	1.40	200	1.5	--	--	--	--
2N1507	NPN AMPL/SWITCH	60	25	5.0	1.00	30	100	300	150	10	1.50	150	50	35	--	--	--
2N1573	NPN AMPL/SWITCH	125	80	5.0	1.00	40	30	100	5.0	5.0	1.00	10	60	10	--	--	--
2N1574	NPN AMPL/SWITCH	125	80	5.0	1.00	40	60	200	5.0	5.0	1.00	10	60	10	--	--	--
2N1613B	NPN AMPL/SWITCH	120	50	7.0	0.10	60	40	120	150	10	0.20	150	60	10	--	--	--
2N1615	NPN AMPL/SWITCH	100	100	6.0	2.00	60	25	--	5.0	10	5.00	50	5.0	20	--	--	--
2N1676	PNP AMPL/SWITCH	4.5	4.5	4.5	0.10	4.5	25	--	2.0	0.2	1.50	10	40	7.0	--	--	--
2N1700	NPN AMPL/SWITCH	60	40	6.0	75	40	20	80	100	4.0	1.00	100	--	--	--	--	--
2N1711	NPN AMPL/SWITCH	75	50	7.0	0.10	60	100	300	150	10	1.00	150	70	25	--	--	--
2N1711B	NPN AMPL/SWITCH	120	50	7.0	0.10	60	100	300	150	10	0.20	150	70	10	--	--	--
2N1716	NPN AMPL/SWITCH	60	60	6.0	2.00	60	40	120	200	5.0	2.00	200	16	50	--	--	--
2N1717	NPN AMPL/SWITCH	100	100	6.0	1.00	75	40	120	200	5.0	2.00	200	16	50	--	--	--
2N1889	NPN AMPL/SWITCH	100	60	7.0	0.10	75	40	120	150	10	5.00	150	50	15	--	--	--
2N1890	NPN AMPL/SWITCH	100	60	7.0	0.10	75	100	300	150	10	1.20	50	60	15	--	--	--
2N1893A	NPN AMPL/SWITCH	140	80	7.0	0.10	90	40	120	150	10	2.00	150	100	8.0	--	--	--
2N1973	NPN AMPL/SWITCH	100	60	7.0	0.025	75	75	--	10	10	1.20	50	60	15	--	--	--
2N1974	NPN AMPL/SWITCH	100	60	7.0	0.025	75	35	--	10	10	1.20	50	50	15	--	--	--

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