

# Small Signal Transistors

## TO-39 Case (Continued)



TYPE NO.	DESCRIPTION	V <sub>CBO</sub>	V <sub>CEO</sub>	V <sub>EBO</sub>	I <sub>CBO</sub>	@ V <sub>CB</sub>	h <sub>FE</sub>		@ I <sub>C</sub>	@ V <sub>CE</sub>	V <sub>CE(SAT)</sub>	@ I <sub>C</sub>	f <sub>T</sub>	C <sub>ob</sub>	t <sub>on</sub>	t <sub>off</sub>	NF
		(V)	(V) *V <sub>CER</sub>	(V)	(μA) *I <sub>CEO</sub> **I <sub>CEV</sub> ***I <sub>CER</sub>	(V)	MIN	MAX	(mA)	(V)	(V)	(mA)	(MHz) *TYP	(pF) *TYP	(ns) *TYP	(ns) *TYP	(dB) *TYP
2N1975	NPN AMPL/SWITCH	100	60	7.0	0.025	75	15	--	10	10	1.20	50	40	15	--	--	--
2N1983	NPN AMPL/SWITCH	50	25	5.0	5.00	30	70	240	5.0	5.0	0.25	5.0	40	45	--	--	--
2N1984	NPN AMPL/SWITCH	50	25	5.0	5.00	30	35	120	5.0	5.0	0.25	5.0	40	45	--	--	--
2N1985	NPN AMPL/SWITCH	50	25	5.0	5.00	30	15	80	5.0	5.0	0.25	5.0	40	45	--	--	--
2N1986	NPN AMPL/SWITCH	50	25	5.0	5.00	30	60	240	150	10	1.50	150	40	35	--	--	--
2N1987	NPN AMPL/SWITCH	50	25	5.0	5.00	30	20	80	150	10	1.50	150	40	35	--	--	--
2N1988	NPN AMPL/SWITCH	100	45	5.0	5.00	50	35	120	30	10	2.00	30	40	20	--	--	--
2N1989	NPN AMPL/SWITCH	100	45	5.0	5.00	50	20	60	30	10	2.00	30	40	20	--	--	--
2N1990	NPN AMPL/SWITCH	100	60	3.0	10	75	20	--	30	10	0.50	2.0	40	20	--	--	--
2N2017	NPN AMPL/SWITCH	60	60	6.0	10	30	50	200	200	10	2.00	200	--	--	--	--	--
2N2049	NPN AMPL/SWITCH	75	40	7.0	0.10	60	100	300	150	10	0.40	10	50	25	--	--	--
2N2102A	NPN AMPL/SWITCH	120	65	7.0	0.002	60	40	120	150	10	0.30	150	60	15	--	--	--
2N2107	NPN AMPL/SWITCH	60	60	6.0	10	30	30	90	200	10	2.00	200	--	--	--	--	--
2N2175	PNP AMPL/SWITCH	6.0	6.0	6.0	1.00	6.0	30	--	0.02	1.5	--	--	3.0	--	--	--	--
2N2177	PNP AMPL/SWITCH	6.0	6.0	6.0	0.50	6.0	35	--	0.05	4.5	--	--	8.0	--	--	--	--
2N2192B	NPN AMPL/SWITCH	60	40	5.0	0.10	30	100	300	150	10	0.18	150	50	20	--	--	--
2N2193B	NPN AMPL/SWITCH	80	50	6.0	0.10	60	40	120	150	10	0.18	150	50	20	--	--	--
2N2195B	NPN AMPL/SWITCH	45	25	5.0	0.10	30	20	--	150	10	0.18	150	50	20	--	--	--
2N2218A	NPN AMPL/SWITCH	75	40	6.0	0.10	60	40	120	150	10	0.30	150	250	8.0	--	--	--
2N2219A	NPN AMPL/SWITCH	75	40	6.0	0.10	60	100	300	150	10	0.30	150	250	8.0	--	--	--
2N2237	NPN AMPL/SWITCH	40	20	6.0	--	--	40	125	100	10	0.25	100	50	35	--	--	--
2N2243A	NPN AMPL/SWITCH	120	80	7.0	10	60	40	120	150	10	0.25	150	50	15	--	--	--
2N2270	NPN AMPL/SWITCH	60	45	7.0	0.05	60	50	200	150	10	0.90	150	100	15	--	--	10
2N2297	NPN AMPL/SWITCH	80	35	7.0	0.10	60	40	120	150	10	0.20	150	60	12	--	--	--
2N2303	PNP AMPL/SWITCH	50	35	5.0	1.00	30	75	200	150	10	1.50	150	60	45	--	--	--
2N2309	NPN AMPL/SWITCH	30	30	5.0	--	--	25	125	0.2	5.0	--	--	40	25	--	--	--
2N2380A	NPN AMPL/SWITCH	80	40	5.0	--	--	20	120	150	10	1.30	150	100	14	--	--	--
2N2405	NPN AMPL/SWITCH	120	90	7.0	0.10	90	60	200	150	10	0.50	150	50	15	--	--	--
2N2410	NPN CORE DRIVER	60	30	5.0	0.30	30	30	120	150	10	0.45	150	200	11	65	65	--
2N2476	NPN CORE DRIVER	60	20	5.0	0.20	50	20	--	150	10	0.40	150	250	10	25	45	--
2N2477	NPN CORE DRIVER	60	20	5.0	0.20	50	40	--	150	10	0.40	150	250	10	25	45	--
2N2479	NPN AMPL/SWITCH	80	40	5.0	--	--	30	120	150	10	0.85	150	150	14	--	--	--
2N2481	NPN SAT SWITCH	40	15	5.0	0.50	20	40	120	10	1.0	0.25	10	300	5.0	40	55	--
2N2594	NPN AMPL/SWITCH	80	80	7.0	0.10	60	50	150	100	5.0	1.00	200	40	20	--	--	--
2N2657	NPN AMPL/SWITCH	80	60	7.0	0.10	60	40	120	1,000	2.0	0.50	1,000	20	150	--	--	--
2N2658	NPN AMPL/SWITCH	100	80	7.0	0.10	60	40	120	1,000	2.0	0.50	1,000	20	150	--	--	--
2N2726	NPN HIGH VOLTAGE	200	150	6.0	1.00	100	30	90	200	10	2.00	200	5.0	--	--	--	--
2N2727	NPN HIGH VOLTAGE	200	150	6.0	1.00	100	75	150	200	10	2.00	200	10	--	--	--	--
2N2800	PNP AMPL/SWITCH	50	35	5.0	0.10	30	30	--	150	10	1.00	150	120	25	--	--	--
2N2801	PNP AMPL/SWITCH	50	35	5.0	0.10	30	75	--	150	10	1.00	150	120	25	--	--	--

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



---

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

---

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

---

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

---

### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centalsemi.com](http://www.centalsemi.com)

**Worldwide Field Representatives:**  
[www.centalsemi.com/wwreps](http://www.centalsemi.com/wwreps)

**Worldwide Distributors:**  
[www.centalsemi.com/wwdistributors](http://www.centalsemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centalsemi.com/terms](http://www.centalsemi.com/terms)