

8514019 SPRAGUE, SEMICONDS/ICS

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T-27-90

PLASTIC-CASE BIPOLAR TRANSISTORS

NPN Transistors

Pro-Electron Device Types

ELECTRICAL CHARACTERISTICS at T_A = 25°C

Device Type	I _C Max. (mA)	V _{(BR)CBO} (V)	V _{(BR)CEO} (V)	V _{(BR)EBO} (V)	I _{CBO}		DC Current Gain				V _{CE(sat)}		f _T		C _{ob} ¹ (pF)	t _s ¹ (ns)	NF ¹ (dB)	Process
					Max. (nA)	@ V _{CB} (V)	h _{FE} Min.	h _{FE} Max.	@ I _C (mA)	@ V _{CE} (V)	Max. (V)	@ I _C (mA)	Min. (MHz)	@ I _C (mA)				
BC317B	500	50	45	6.0	30	20	200	450	2.0	5.0	0.2	10	—	—	7.0	—	6.0	JGA
BC318	500	30	20	5.0	30	20	110	800	2.0	5.0	0.2	10	—	—	7.0	—	6.0	JGA
BC318A	500	30	20	5.0	30	20	110	220	2.0	5.0	0.2	10	—	—	7.0	—	6.0	JGA
BC318B	500	30	20	5.0	30	20	200	450	2.0	5.0	0.2	10	—	—	7.0	—	6.0	JGA
BC318C	500	30	20	5.0	30	20	450	800	2.0	5.0	0.2	10	—	—	7.0	—	6.0	JGA
BC319	500	30	20	5.0	30	20	200	800	2.0	5.0	0.2	10	—	—	7.0	—	4.0	JGA
BC319B	500	30	20	5.0	30	20	200	450	2.0	5.0	0.2	10	—	—	7.0	—	4.0	JGA
BC319C	500	30	20	5.0	30	20	420	800	2.0	5.0	0.2	10	—	—	7.0	—	4.0	JGA

NOTES:

- 1) Maximum at typical JEDEC conditions.
- 2) μA.

- 3) V_{(BR)CES}/I_{CES}, as applicable.
- 4) mA.
- 5) V_{(BR)CER} at R = 10Ω.

PNP Transistors

'2N' and 'TP' Device Types

ELECTRICAL CHARACTERISTICS at T_A = 25°C

Device Type	I _C Max. (mA)	V _{(BR)CBO} (V)	V _{(BR)CEO} (V)	V _{(BR)EBO} (V)	I _{CBO}		DC Current Gain				V _{CE(sat)}		f _T		C _{ob} ¹ (pF)	t _s ¹ (ns)	NF ¹ (dB)	Process
					Max. (nA)	@ V _{CB} (V)	h _{FE} Min.	h _{FE} Max.	@ I _C (mA)	@ V _{CE} (V)	Max. (V)	@ I _C (mA)	Min. (MHz)	@ I _C (mA)				
TP2904	500	60	40	5.0	20	50	40	120	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2904A	500	60	60	5.0	10	50	40	120	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2905	500	60	40	5.0	20	50	100	300	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2905A	500	60	60	5.0	10	50	100	300	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2906	500	60	40	5.0	20	50	40	120	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2906A	500	60	60	5.0	10	50	40	120	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2907	500	60	40	5.0	20	50	100	300	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2907A	500	60	60	5.0	10	50	100	300	150	10	0.4	150	200	50	8.0	100	—	DDA
TP2944	50	15	10	15	100	15	80	—	1.0	0.5	—	—	10	1.0	10	—	25	SHF
TP2945	50	25	20	25	200	25	40	—	1.0	0.5	—	—	5.0	1.0	10	—	25	SHF
TP2946	50	40	35	40	500	40	30	—	1.0	0.5	—	—	3.0	1.0	10	—	25	SHF
TP3250	200	50	40	5.0	—	—	50	150	10	1.0	0.25	10	250	10	6.0	225	6.0	BTB
TP3251	200	50	40	5.0	—	—	100	300	10	1.0	0.25	10	300	20	6.0	250	6.0	BTB
TP3638	500	25	25	4.0	35 ³	15	20	—	50	1.0	0.25	50	100	50	20	170	—	DDA
TP3638A	500	25	25	4.0	25 ³	15	100	—	50	1.0	0.25	50	150	50	10	170	—	DDA

NOTES:

- 1) Maximum at typical JEDEC conditions.
- 2) μA.

- 3) V_{(BR)CES}/I_{CES}, as applicable.
- 4) mA.
- 5) V_{(BR)CER} at R = 10Ω.