

**General Transistor Corporation**  
 216 WEST FLORENCE AVENUE  
 INGLEWOOD, CALIFORNIA 90301  
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**CASE TO-63**  
 $I_{C(MAX)} = 20 \text{ to } 60A$   
 $V_{CEO(SUS)} = 40-300V$

**NPN Power Transistors**

Type No.	V <sub>CEO</sub> (max) (V)	I <sub>C</sub> (max) (A)	h <sub>FE</sub> @I <sub>C</sub> /V <sub>CE</sub> (min-max @ AV)	V <sub>CE(SAT)</sub> @ I <sub>C</sub> /I <sub>B</sub> (V @ A/A)	V <sub>BE</sub> @ I <sub>C</sub> /V <sub>CE</sub> (V @ AV)	V <sub>BE (SAT)</sub> @ I <sub>C</sub> /I <sub>B</sub> (V @ AV)	I <sub>CEV</sub> @V <sub>CE</sub> (mA @ V)	P <sub>D</sub> @ T <sub>C</sub> =100°C (Watts)	I <sub>amb</sub> @V <sub>CE</sub> t = 1 sec (A @ V)	f <sub>r</sub> (MHz)	t <sub>on</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)	t <sub>OFF</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)
2N1936	60	20	10-50 @ 10/10	.75 @ 10/1.6	1.25 @ 10/3		10 @ 120	150	5 @ 30	4	.5 @ 15/1.2	1.5 @ 15/1.2
2N1937	80	20	10-50 @ 10/10	.75 @ 10/1.6	1.25 @ 10/3		10 @ 120	150	5 @ 30	4	.5 @ 15/1.2	1.5 @ 15/1.2
2N3265	90	20	25-55 @ 15/2	1 @ 20/2		1.8 @ 20/2	20 @ 150	100	.35 @ 75	20	.5 @ 15/1.2	2 @ 15/1.2
2N3268	60	20	20-80 @ 15/3	1.6 @ 20/2		2.2 @ 20/2	20 @ 120	100	.70 @ 50	20	.5 @ 15/1.2	2 @ 15/1.2
2N3846	200	20	40-200 @ 5/3	.75 @ 10/1.6	1.25 @ 10/3		2 <sup>g</sup> @ 300	150	7.5 @ 20	10	4 @ 10/2	7 @ 10/2
2N3847	300	20	40-200 @ 5/3	.75 @ 10/1.6	1.25 @ 10/3		2 <sup>g</sup> @ 400	150	7.5 @ 20	10	4 @ 10/2	7 @ 10/2
2N3848	200	20	40-200 @ 5/4	1 @ 15/2	1.4 @ 15/4		2 <sup>g</sup> @ 300	150	7.5 @ 20	10	4 @ 10/2	7 @ 10/2
2N3849	300	20	40-200 @ 5/4	1 @ 15/2	1.4 @ 15/4		2 <sup>g</sup> @ 400	150	7.5 @ 20	10	4 @ 10/2	7 @ 10/2
2N4002	80	30	20-80 @ 15/4	1.2 @ 30/4	1.8 @ 30/4		1 <sup>h</sup> @ 90	100	8 @ 12.5	30	1 @ 15/1.5	3 @ 15/1.5
2N4003	100	30	20-80 @ 15/4	1.2 @ 30/4	1.8 @ 30/4		1 <sup>h</sup> @ 110	100	8 @ 12.5	30	1 @ 15/1.5	3 @ 15/1.5
2N4210	60	20	20-100 @ 10/6	1 @ 10/1	1.6 @ 10/6		.5 <sup>h</sup> @ 80	100	3.3 @ 30	10	.5 @ 15/1.2	1.5 @ 15/1.2
2N4211	80	20	20-100 @ 10/6	1 @ 10/1	1.6 @ 10/6		.5 <sup>h</sup> @ 100	100	3.3 @ 30	10	.5 @ 15/1.2	1.5 @ 15/1.2
2N5539	130	20	20-75 @ 10/5	.8 @ 15/1.5		1.5 @ 15/1.5	.2 @ 175	100	3.3 @ 30	20	.5 @ 10/1	2 @ 10/1
2N5733	80	30	30-300 @ 10/2	1.2 @ 20/2	1.5 <sup>h</sup> @ 20/2		1 <sup>h</sup> @ 100	100	6 @ 25	30	.7 @ 10/1	4 @ 10/1
2N5968	100	30	30-120 @ 10/10	.8 @ 10/1			.5 <sup>h</sup> @ 100	125	5 @ 25	10	.5 @ 30/3	1 @ 30/3
2N6046	60	20	20-100 @ 10/6	2 @ 20/1.33			5 @ 70	114	5.2 @ 22	30	.6 @ 20/1.33	.9 @ 20/1.33
2N6047	100	20	20-100 @ 20/4	2 @ 20/1.33		2 @ 20/1.33	5 @ 110	114	5.2 @ 22	30	.6 @ 20/1.33	.9 @ 20/1.33
2N6048	140	20	20-100 @ 20/4	2 @ 20/1.33		2 @ 20/1.33	5 @ 150	114	5.2 @ 22	30	.6 @ 20/1.33	.9 @ 20/1.33
2N6062	100	50	20-120 @ 20/10	1 @ 20/2		2.5 @ 60/6	.5 <sup>h</sup> @ 100	150	6 @ 25	10	.5 @ 40/4	1 @ 40/4
2N6215	80	50	25-150 @ 25/2	1.5 @ 50/5		1.5 @ 25/1.25	.2 @ 100	125	.7 @ 18	20	1 @ 25/1.25	1.25 @ 25/1.25
2N6278	100	50	30-120 @ 20/4	1.2 @ 20/2		1.8 @ 20/2	.01 @ 120	143	30 @ 8.3	30	.35 @ 20/2	1.05 @ 20/2
2N6279	120	50	30-120 @ 20/4	1.2 @ 20/2		1.8 @ 20/2	.01 @ 140	143	30 @ 8.3	30	.35 @ 20/2	1.05 @ 20/2
2N6280	140	50	30-120 @ 20/4	1.2 @ 20/2		1.8 @ 20/2	.01 @ 160	143	30 @ 8.3	30	.35 @ 20/2	1.05 @ 20/2
2N6281	150	50	30-120 @ 20/4	1.2 @ 20/2		1.8 @ 20/2	.01 @ 180	143	30 @ 8.3	30	.35 @ 20/2	1.05 @ 20/2
2N6324	200	30	40-150 @ 5/5	1.5 @ 20/2	2.5 @ 30/5		2 <sup>g</sup> @ 300	200	4.5 @ 44	10	.6 @ 20/2	3 @ 20/2
2N6325	300	30	30-150 @ 5/5	1.5 @ 20/2	2.5 @ 30/5		2 <sup>g</sup> @ 400	200	4.5 @ 44	10	.6 @ 20/2	3 @ 20/2

NOTES: b) I<sub>CB0</sub> @ V<sub>CB</sub> (mA @ V) g) I<sub>CE5</sub> @ V<sub>CE</sub> (mA @ V) <sup>h</sup> (typical)

**CASE TO-114**  
 $I_{C(MAX)} = 40-100A$   
 $V_{CEO(SUS)} = 40 \text{ to } 160V$

Type No.	V <sub>CEO</sub> (max) (V)	I <sub>C</sub> (max) (A)	h <sub>FE</sub> @I <sub>C</sub> /V <sub>CE</sub> (min-max @ AV)	V <sub>CE(SAT)</sub> @ I <sub>C</sub> /I <sub>B</sub> (V @ A/A)	V <sub>BE (SAT)</sub> @ I <sub>C</sub> /I <sub>B</sub> (V @ AV)	I <sub>CEV</sub> @V <sub>CE</sub> (mA @ V)	P <sub>D</sub> @ T <sub>C</sub> =100°C (Watts)	I <sub>amb</sub> @V <sub>CE</sub> t = 1 sec (A @ V)	f <sub>r</sub> (MHz)	t <sub>on</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)	t <sub>OFF</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)
2N3149	80	70	>10 @ 50/3	1.5 @ 50/10	2.5 @ 10/10	2 @ 80	200		.1	10 @ 50/10	20 @ 50/10
2N3150	100	70	>10 @ 50/3	1.5 @ 50/10	2.5 @ 50/10	2 @ 100	200		.1	10 @ 50/10	20 @ 50/10
2N3151	150	70	>10 @ 50/3	1.5 @ 50/10	2.5 @ 50/10	2 @ 150	200		.1	10 @ 50/10	20 @ 50/10
2N4865	80	90	10-40 @ 70/5	2.5 @ 70/7	2.5 @ 70/7	.5 @ 100	200	10 @ 20	10	2 @ 70/7	2 @ 70/7
2N4866	120	90	10-40 @ 70/5	2.5 @ 70/7	2.5 @ 70/7	.5 @ 140	200	10 @ 20	10	2 @ 70/7	2 @ 70/7
2N4950	60	70	>10 @ 50/3	1.5 @ 50/10	2.5 @ 50/10	2 @ 60	200		.1	10 @ 50/10	20 @ 50/10
2N5250	100	90	10-40 @ 70/5	2.5 @ 70/7	2.5 @ 70/7	.5 @ 125	200	10 @ 20	10	2 @ 70/7	2 @ 70/7
2N5251	150	90	10-40 @ 70/5	2.5 @ 70/7	2.5 @ 70/7	.5 @ 180	200	10 @ 20	10	2 @ 70/7	2 @ 70/7
2N5489	100	40	15-60 @ 40/6	1.5 @ 40/8	2.5 @ 40/6	2 <sup>g</sup> @ 125	200		.5	2 @ 70/7	2 @ 70/7
2N5587	120	80	10-30 @ 80/2	2 @ 80/8	2.5 @ 80/8	2 <sup>g</sup> @ 160	200		.5	2 @ 70/7	2 @ 70/7
2N5588	160	80	10-30 @ 80/2	2 @ 80/8	2.5 @ 80/8	2 <sup>g</sup> @ 160	200		.5	2 @ 70/7	2 @ 70/7
2N5927	120	100	10-40 @ 70/2	75 @ 70/7	1.5 <sup>h</sup> @ 70/2	2 @ 150	200		1	2.5 @ 50/10	5.5 @ 50/10

NOTES: g) I<sub>CE5</sub> @ V<sub>CE</sub> (V @ AV) <sup>h</sup> (typical)

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CASE TO-66

$I_C(MAX) = 1-7A$

$V_{CEO(SUS)} = 35-400V$

NPN Power Transistors

Type No.	PNP Complement	V <sub>CEO</sub> (max) (V)	I <sub>C</sub> (max) (A)	$\beta_{FE}(I_C/V_{CE})$ (min-max @ AV)	V <sub>CE(SAT)</sub> @ I <sub>C</sub> /I <sub>B</sub> (V @ A/A)	V <sub>BE</sub> @ I <sub>C</sub> /V <sub>CE</sub> (V @ AV)	V <sub>BE</sub> (SAT) @ I <sub>C</sub> /I <sub>B</sub> (V @ AV)	I <sub>CEV</sub> @V <sub>CE</sub> (mA @ V)	P <sub>D</sub> @ TC = 25°C (Watts)	$f_{sw}$ @V <sub>CE</sub> t = 1 sec (A @ V)	f <sub>r</sub> (MHz)	t <sub>on</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)	t <sub>OFF</sub> @ I <sub>C</sub> /I <sub>B</sub> (μs @ A/A)
2N3054A	2N6049	55	4	25-100 @ .5/4	1 @ 5/.05	1.7 @ .5/4		1 @ 90	75	3 @ 25	3	.7 @ 1.5/15	1.8 @ 1.5/1.5
2N3583	2N6211	250*	1	40-200 @ .5/10	5 @ 1/.125	1.4 @ 1/10		1 @ 225	35	.35 @ 100	10		
2N3584	2N6212	300*	5	25-100 @ 1/10	.75 @ 1/1.25		1.4 @ 1/1	1 @ 300	35	.35 @ 100	10	3 @ 1/1	7 @ 1/1
2N3585	2N6213	400*	5	25-100 @ 1/10	.75 @ 1/1.25		1.4 @ 1/1	1 @ 400	35	.35 @ 100	10	3 @ 1/1	7 @ 1/1
2N3738		225	.25	40-200 @ .1/10	2.5 @ 25/.025	1 @ .1/10		.5 @ 250	20	2 @ 100	10		
2N3739		300	.25	40-200 @ .1/10	2.5 @ 25/.025	1 @ .1/10		.5 @ 300	20	2 @ 100	10		
2N3766	2N3740	60	1	40-160 @ .5/5	1 @ .5/.05	1.5 @ 1/10		.1 @ 80	20	.4 @ 50	10		
2N3767	2N3741	80	1	40-160 @ .5/5	1.2 @ .5/.05	1.5 @ 1/10		.1 @ 100	20	.4 @ 50	10		
2N3878		50	4	40-200 @ .5/2	2 @ 4/4	2.5 @ 4/2		25 @ 120	35	.75 @ 40	40	.3 @ 4/4	1.2 @ 4/4
2N3879		75	7	12-100 @ 4/2	1.2 @ 4/4		2 @ 4/4	.25 @ 120	35	.5 @ 40	40	.5 @ 4/4	1.2 @ 4/4
2N4231		40	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 40	35	1.75 @ 20	4	.7 @ 1.5/15	1.8 @ 1.5/15
2N4231A	2N6312	40	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 40	75	3 @ 25	4		1.8 @ 1.5/15
2N4232		60	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 60	35	1.75 @ 20	4	.7 @ 1.5/15	1.8 @ 1.5/15
2N4232A	2N6313	60	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 60	75	3 @ 25	4	.7 @ 1.5/15	1.8 @ 1.5/15
2N4233		80	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 80	35	1.75 @ 20	4	.7 @ 1.5/15	1.8 @ 1.5/15
2N4233A	2N6314	80	3	25-100 @ 1.5/2	.7 @ 1.5/15	1.4 @ 1.5/2		.1 @ 80	75	3 @ 25	4	.7 @ 1.5/15	1.8 @ 1.5/15
2N4240		400*	5	30-150 @ .75/10	1 @ .75/.075		1.8 @ .75/.075	2 @ 400	35	.35 @ 100	15	.5 @ .75/.075	9 @ .75/.075
2N4273		140	2	20-140 @ 1/10	.6 @ 5/.05	1.1 @ 1/10		.1 @ 175	25	2 @ 20	10	.3 @ .75/1	1.5 @ .75/1
2N4296		250	1	50-150 @ .05/10	.9 @ .05/.005	.9 @ 1/10		.1 @ 350	20	.05 @ 200	20	7 @ 1/01	10 @ 1/01
2N4297		250	1	75-300 @ .05/10	.9 @ .05/.005	.9 @ 1/10		.1 @ 350	20	.05 @ 200	20	7 @ 1/01	10 @ 1/01
2N4298		350	1	25-75 @ .05/10	.9 @ .05/.005	.9 @ 1/10		.1 @ 500	20	.05 @ 200	20	7 @ 1/01	10 @ 1/01
2N4299		350	1	50-150 @ .05/10	.9 @ .05/.005	.9 @ 1/10		.1 @ 500	20	.05 @ 200	20	7 @ 1/01	10 @ 1/01
2N4864		120	2	50-150 @ .5/2	.2 @ .05/.05		1.2 @ .5/.05	.01 @ 140	29	2 @ 20	50	.3 @ .75/1	1.5 @ .75/1
2N4910	2N4898	40	1	20-100 @ .5/1	.6 @ 1/1	1.3 @ 1/1		.1 @ 40	25	1 @ 25	3		
2N4911	2N4899	60	1	20-100 @ .5/1	.6 @ 1/1	1.3 @ 1/1		.1 @ 60	25	1 @ 25	3		
2N4912	2N4900	80	1	20-100 @ .5/1	.6 @ 1/1	1.3 @ 1/1		.1 @ 80	25	1 @ 25	3		
2N5050		125	2	25-100 @ .75/5	1 @ .75/1	1.2 @ .75/5		.5 @ 125	40	2 @ 20	10	.3 @ .75/1	4.7 @ .75/1
2N5051		150	2	25-100 @ .75/5	1 @ .75/1	1.2 @ .75/5		.5 @ 150	40	2 @ 20	10	.3 @ .75/1	4.7 @ .75/1
2N5052		200	2	25-100 @ .75/5	1 @ .75/1	1.2 @ .75/5		.5 @ 200	40	2 @ 20	10	.3 @ .75/1	4.7 @ .75/1
5N5202		50	4	10-100 @ 4/1.2	1.2 @ 4/4		2 @ 4/4	10 @ 100	35	.4 @ 40	40	.4 @ 2/8	1.6 @ 4/8
2N5427		80	7	30-120 @ 2/2	1.2 @ 7/7		1.2 @ 2/2	.01 @ 75	40	5 @ 8	30	2 @ 2/2	2.2 @ 2/2
2N5428		80	7	60-240 @ 2/2	1.2 @ 7/7		1.2 @ 2/2	.01 @ 75	40	5 @ 8	30	2 @ 2/2	2.2 @ 2/2
2N5429		100	7	30-120 @ 2/2	1.2 @ 7/7		1.2 @ 2/2	.01 @ 90	40	5 @ 8	30	2 @ 2/2	2.2 @ 2/2
2N5430		100	7	60-240 @ 2/2	1.2 @ 7/7		1.2 @ 2/2	.01 @ 90	40	5 @ 8	30	2 @ 2/2	2.2 @ 2/2
2N5468		400	3	15-60 @ 3/5	5 @ 3/6	1.5 @ 3/6		.25 @ 500	70	.875 @ 80	2.5	.25 @ 1/05	2 @ 1/05
2N5469		400	3	15-60 @ 3/5	5 @ 3/6	1.5 @ 3/6		.25 @ 700	70	.875 @ 80	2.5	.25 @ 1/05	2 @ 1/05
2N5660		200	1	40-120 @ .5/5	.4 @ 1/1		1.2 @ 1/1	001* @ 250	35	1.1' @ 45	20	.25 @ 5/015	.85 @ 5/015
2N5661		300	1	25-75 @ .5/5	.4 @ 1/1		1.2 @ 1/1	001* @ 400	35	1.1' @ 45	20	.25 @ 5/015	1.2 @ 5/015
2N5664		200	3	40-120 @ 1/5	.4 @ 3/3		1.2 @ 3/3	001* @ 250	52.5	.875' @ 80	20	.25 @ 1/03	1.5 @ 1/03
2N5665		300	3	25-75 @ 1/5	.4 @ 3/6		1.2 @ 3/6	001* @ 250	52.5	.875' @ 80	20	.25 @ 1/05	2 @ 1/05
2N6077		275	7	12-70 @ 1.2/1	.5 @ 1.2/2		1.9 @ 3/6	5 @ 250	45	.9 @ 50	1	.75 @ 1.2/2	5.75 @ 1.2/2
2N6078		250	7	12-70 @ 1.2/1	.5 @ 1.2/2		2 @ 5/1	.05 @ 250	45	.9 @ 50	1	.75 @ 1.2/2	5.75 @ 1.2/2
2N6079		350	7	12-50 @ 1.2/1	.5 @ 1.2/2		2 @ 4/8	.5 @ 450	45	.9 @ 50	1	.75 @ 1.2/2	5.75 @ 1.2/2
2N6233		225	5	25-125 @ 1/5	.5 @ 1/1	1 @ 1/5		.1' @ 250	50	1.1 @ 45	20	.5 @ 1/1	4 @ 1/1
2N6234		275	5	25-125 @ 1/5	.5 @ 1/1	1 @ 1/5		.1' @ 300	50	1.1 @ 45	20	.5 @ 1/1	4 @ 1/1
2N6235		325	5	25-125 @ 1/5	.5 @ 1/1	1 @ 1/5		.1' @ 350	50	1.1 @ 45	20	.5 @ 1/1	4 @ 1/1
2N6260		40	3	20-100 @ 1.5/4	1.5 @ 1.5/15			5 @ 40	30				
2N6261		80	4	25-100 @ 1.5/2	.5 @ 1.5/15			.5 @ 80	50				
2N6315	2N6317	60	7	20-100 @ 2.5/4	1 @ 4/4	1.5 @ 2.5/4		.25 @ 60	90	3 @ 30	4	.7 @ .5/25	1.8 @ 2.5/25
2N6316	2N6318	80	7	20-100 @ 2.5/4	1 @ 4/4	1.5 @ 2.5/4		.25 @ 80	90	3 @ 30	4	.7 @ .5/25	1.8 @ 2.5/25
2N6372	2N5956	40	6	20-100 @ 3/4	1 @ 3/3	2 @ 3/4		.1 @ 45	40	1.1 @ 36	4	.7 @ 1.5/15	1.8' @ 1.5/15
2N6373	2N5955	60	6	20-100 @ 2.5/4	1 @ 2.5/25	2 @ 2.5/4		.1 @ 65	40	1.1 @ 36	4	.7 @ 1.5/15	1.8' @ 1.5/15
2N6374	2N5954	80	6	20-100 @ 2/4	1 @ 2/2	2 @ 2/4		.1 @ 85	40	1.1 @ 36	4	.7 @ 1.5/15	1.8' @ 1.5/15

NOTES: b) ICBO @ VCB (mA @ V) g) ICES @ VCE (mA @ V) h) V<sub>CE</sub>R (V) i) (typical)