

silicon power transistors



NPN TO-63 (cont'd)

$I_{C(MAX)} = 10 \text{ to } 30\text{A}$

$V_{CE(SUS)} = 60 \text{ to } 350\text{V}$

$f_r = 0.6 \text{ to } 30 \text{ MHz}$

Type #	$V_{CE(SUS)}$ (Volts)	h_{FE} @ I_C/V_{CE} (Min-Max @ A/V)	$V_{CE(SAT)}$ @ I_C/I_B (V @ A/A)	V_{BE} @ I_C/V_{CE} (V @ A/V)	I_{CEV} @ V_{CE} (mA @ V)	P_D @ $T_C=100^\circ\text{C}$ (Watts)	θ_{JC} ($^\circ\text{C/W}$)	$I_{S/B}$ @ V_{CE} $t = 1\text{sec}$ (A @ V)	f_r (MHz)	t_{ON} @ I_C/I_B (μs @ A/A)	t_{OFF} @ I_C/I_B (μs @ A/A)	Generic Product	General Information
STA6046	60	20-100@20/4	2@20/1.33	2 ³ @20/1.33	5@70	114	.875	5.2@22	30	.6@20/1.33	9@20/1.33	STA6046 Family, 250 x 250 Mil Chip, Double Epitaxial Process, Ultrasonically Bonded Leads, Case 531	High Current, High Speed Power Switch and Amplifier, Military Usage.
STA6047	100	20-100@20/4	2@20/1.33	2 ³ @20/1.33	5@110	114	.875	5.2@22	30	.6@20/1.33	9@20/1.33		
STA6048	140	20-100@20/4	2@20/1.33	2 ³ @20/1.33	5@150	114	.875	5.2@22	30	.6@20/1.33	9@20/1.33		
Typical Values	110	20-200@20/4	1@20/1.33	1.8³@20/1.33	1@110	114	.875	5.2@22	30	.5@20/1.33	.8@20/1.33		
NOTE: This product is developmental.													
STA9860	225	10-200@10/4	2@10/1	2.5@10/4	5@225	100	1.0	5@20	20	.6@10/1	3@10/1	STA9860 Family, 200 x 200 Mil Chip, Double Epitaxial Process, Ultrasonically Bonded Leads, Case 531	High Voltage, High Speed Power Switch and Amplifier, Military Usage.
STA9861	300	10-200@8/4	2@8/8	2.5@8/4	1.0@300	100	1.0	5@20	20	.6@8/8	3@8/8		
STA9862	350	10-200@5/4	2@5/5	2.5@5/4	1.0@350	100	1.0	5@20	20	.5@5/5	3@5/5		
STA9863	225	10-200@5/4	2@5/5	2.5@5/4	5@225	100	1.0	5@20	20	.5@5/5	3@5/5		
STA9864	300	10-200@5/4	2@5/5	2.5@5/4	1.0@300	100	1.0	5@20	20	.5@5/5	3@5/5		
Typical Values	275	10-200@5/4	1@5/5	1.8@5/4	1@275	100	1.0	5@20	20	.5@5/5	2.5@5/5		
NOTE: This product is developmental.													
STA9870	225	10-200@20/4	2@20/2	2.5@20/4	5@225	114	.875	2.5@22	20	.6@20/2	3@20/2	STA9870 Family, 250 x 250 Mil Chip, Double Epitaxial Process, Ultrasonically Bonded Leads, Case 531	High Voltage, High Current, High Speed Power Switch and Amplifier, Military Usage.
STA9871	300	10-200@15/4	2@15/1.5	2.5@15/4	1.0@300	114	.875	5.2@22	20	.6@15/1.5	3@15/1.5		
STA9872	350	10-200@12/4	2@12/1.2	2.5@12/4	1.0@350	114	.875	5.2@22	20	.5@12/1.2	3@12/1.2		
Typical Values	250	10-200@12/4	1@12/1.2	1.8³@12/1.2	1@250	114	.875	5.2@22	20	.5@12/1.2	2.5@12/1.2		
NOTE: This product is developmental.													

NOTES:

³ $V_{BE(SAT)}$ @ I_C/I_B (V @ A/A)



NPN TO-114

$I_{C(MAX)} = 70\text{A}$

$V_{CE(SUS)} = 80 \text{ to } 150\text{V}$

$f_r = 0.1 \text{ MHz}$

Type #	$V_{CE(SUS)}$ (Volts)	h_{FE} @ I_C/V_{CE} (Min-Max @ A/V)	$V_{CE(SAT)}$ @ I_C/I_B (V @ A/A)	V_{BE} @ I_C/V_{CE} (V @ A/V)	I_{CEV} @ V_{CE} (mA @ V)	P_D @ $T_C=100^\circ\text{C}$ (Watts)	θ_{JC} ($^\circ\text{C/W}$)	$I_{S/B}$ @ V_{CE} $t = 1\text{sec}$ (A @ V)	f_r (MHz)	t_{ON} @ I_C/I_B (μs @ A/A)	t_{OFF} @ I_C/I_B (μs @ A/A)	Generic Product	General Information
2N3149	80	>10@50/3	1.5@50/10	2.5 ³ @50/10	2@80	200	0.5		0.1	10@50/10	20@50/10	2N3149 Family, 476 Mil Diameter Chip, Single Diffused Process Clip Leads, Case 600	High Current, High Power Amplifier and Switch, Military Usage.
2N3150	100	>10@50/3	1.5@50/10	2.5 ³ @50/10	2@100	200	0.5		0.1	10@50/10	20@50/10		
2N3151	150	>10@50/3	1.5@50/10	2.5 ³ @50/10	2@150	200	0.5		0.1	10@50/10	20@50/10		
Typical Values	110	8-60@50/3	1.2@50/10	2³@50/10	1@110	200	0.5	4@50	0.5	9@50/10	17@50/10		

³ $V_{BE(SAT)}$ @ I_C/I_B (V @ A/A)



germanium power transistors

PNP TO-5

$I_{C(MAX)} = 3\text{A}$

$V_{CE(SUS)} = 30 \text{ to } 60\text{V}$

Type #	$V_{CE(SUS)}$ (Volts)	V_{EBO} (Volts)	h_{FE} @ I_C/V_{CE} (Min-Max @ A/V)	$V_{CE(SAT)}$ @ I_C/I_B (V @ A/A)	V_{BE} @ I_C/V_{CE} (V @ A/V)	I_{CEV} @ V_{CE} (mA @ V)	P_D @ $T_C = 25^\circ\text{C}$ (Watts)	θ_{JC} ($^\circ\text{C/W}$)	$T_{J(MAX)}$ ($^\circ\text{C}$)	f_r (KHz)	Generic Product	General Information
2N1038	30	20	20-60@1/5	.25@1/1	1@1/5	.65@40	20	3.75	100	225	2N1038 Family, 3 Amp PNP Germanium Alloy Power Transistors, Case 102	General Purpose Power Switch and Amplifier, Consumer, Industrial, and Military Usage.
2N1039	40	20	20-60@1/5	.25@1/1	1@1/5	.65@60	20	3.75	100	225		
2N1040	50	20	20-60@1/5	.25@1/1	1@1/5	.65@80	20	3.75	100	225		
2N1041	60	20	20-60@1/5	.25@1/1	1@1/5	.65@100	20	3.75	100	225		
2N2564	30	20	20-60@3/1	.75@3/3	1.5@3/1	.65@40	20	3.75	100	250		
2N2565	40	20	20-60@3/1	.75@3/3	1.5@3/1	.65@60	20	3.75	100	250		
2N2566	50	20	20-60@3/1	.75@3/3	1.5@3/1	.65@80	20	3.75	100	250		
2N2567	60	20	20-60@3/1	.75@3/3	1.5@3/1	.65@100	20	3.75	100	250		
2N2569	30	20	30-90@5/5	.2@5/05	.6@5/5	.6@50	15	5.0	100	280		
2N2660	40	20	30-90@5/5	.2@5/05	.6@5/5	.6@70	15	5.0	100	280		
2N2661	50	20	30-90@5/5	.2@5/05	.6@5/5	.6@90	15	5.0	100	280		
2N2665	30	20	50-150@5/5	.25@5/.025	.6@5/5	.6@50	15	5.0	100	300		
2N2666	40	20	50-150@5/5	.25@5/.025	.6@5/5	.6@70	15	5.0	100	300		
2N2667	50	20	50-150@5/5	.25@5/.025	.6@5/5	.6@90	15	5.0	100	300		