

# silicon power transistors



## NPN TO-66

$I_{C(MAX)} = 1.0 \text{ to } 7.0\text{A}$

$V_{CEO(SUS)} = 35 \text{ to } 350\text{V}$

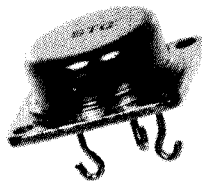
$f_T = 0.75 \text{ to } 60 \text{ MHz}$

Type #	$V_{CEO(SUS)}$ (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)	$P_D$ @ $T_C = 25^\circ\text{C}$ (Watts)	$\theta_{JC}$ ( $^\circ\text{C/W}$ )	$I_{S/B}$ @ $V_{CE}$ $t = 1\text{sec}$ (A @ V)	$f_T$ (MHz)	$t_{ON}$ @ $I_C/I_B$ ( $\mu\text{s}$ @ A/A)	$t_{OFF}$ @ $I_C/I_B$ ( $\mu\text{s}$ @ A/A)	Generic Product	General Information		
2N3054	55	20-100@.5/4	1@.5/.05	1.7@.5/4	1.0@90	29	6.0					2N3054 Family. 115 x 115 Mil Chip. Single Diffused Process. Clip Leads. Case 620	General Purpose Power Switch and Amplifier. Consumer and Industrial Usage.		
STC40250	40	25-100@1.5/4	1.5@1.5/.15	2.2@1.5/4	1@30	29	6.0								
STC40310	35	20-120@1/2		1.4@1/2	.01@15	29	6.0		.75						
STC40312	60( $V_{CE}$ )	20-120@1/2		1.4@1/2	.01@15	29	6.0		.75						
STC40316	40( $V_{CE}$ )	20-120@1/2		1.4@1/2	.01@15	29	6.0		.75						
STC40324	35	20-120@1/2		1.4@1/2	.01@15	29	6.0		.75						
Typical Values	60	20-120@1/2	1@1.5/.15	1.2@1/2	.01@15	29	6.0	.6@48	1.0	3@1/1	6@1/1				
2N3441	140	20-80@.5/4	1@.5/.05	1.7@.5/4	1@140	25	7.0	.24@120				2N3441 Family. 115 x 115 Mil Chip. Single Diffused Process. Clip Leads. Case 620	General Purpose Power Switch and Amplifier. Consumer and Industrial Usage.		
Typical Values	150	20-120@.5/4	1@.5/.05	1.5@.5/4	1@140	29	6.0	.24@120	1.0	3@1/1	6@1/1				
STA3878	50	40-200@.5/2	2@4/.4	2.5@4/2	25@120	35	5.0	.75@40	40			STA3878 Family. 140 x 140 Mil Chip. Double Epitaxial Process. Ultra- sonically Bonded Leads. Case 621	High Speed Power Switch and Amplifier. Consumer, Industrial, and Military Usage.		
STA3879	75	12-100@4/2	1.2@4/.4	2@4/4	25@120	35	5.0	.5@40	40	.5@4/4	1.2@4/4				
STA5050	125	25-100@.75/5	1@.75/.1	1.2@.75/5	.5@125	40	3.75	2@20	10	.3@.75/1	4.7@.75/1				
STA5051	150	25-100@.75/5	1@.75/.1	1.2@.75/5	.5@150	40	3.75	2@20	10	.3@.75/1	4.7@.75/1				
STA5202	50	10-100@4/1.2	1.2@4/4	2@4/4	10@100	35	5.0	.4@40	60	.4@4/8	1.6@4/8				
STA5427	80	30-120@2/2	1.2@7/7	1.2@2/2	.01@75	40	4.37	5@8	30	.2@2/2	2.2@2/2				
STA5428	80	60-240@2/2	1.2@7/7	1.2@2/2	.01@75	40	4.37	5@8	30	.2@2/2	2.2@2/2				
STA5429	100	30-120@2/2	1.2@7/7	1.2@2/2	.01@90	40	4.37	5@8	30	.2@2/2	2.2@2/2				
STA5430	100	60-240@2/2	1.2@7/7	1.2@2/2	.01@90	40	4.37	5@8	30	.2@2/2	2.2@2/2				
STA8250	140	20-200@2/2	1.2@4/4	1.8@4/2	4@140	40	4.37	.75@40	30	.2@2/2	1.0@2/2				
STA40364	60( $V_{CE}$ )	35-175@.5/5	2@2.5/.25	1.8@2.5/5	.5@50	35	5.0	.75@40	15						
Typical Values	120	20-200@2/2	1@4/4	1.7@4/2	4@120	40	4.37	2@20	40	.2@2/2	.6@2/2				
NOTE: This product is developmental.															
STA3583	175	40-200@.5/10	5@1/.125	1.4@1.0/10	1.0@225	35	5.0	.35@100	10					STA3583 Family. 140 x 140 Mil Chip. Double Epitaxial Process. Ultra- sonically Bonded Leads. Case 621	High Voltage, High Speed Power Switch and Amplifier. Consumer, Industrial, and Military Usage.
STA3584	250	8-140@1/2	.75@1.0/.125	1.4@1/1	1.0@300	35	5.0	.35@100	10	3@1.0/1	7@1.0/1				
STA3585	300	8-140@1/2	.75@1.0/.125	1.4@1/1	1.0@400	35	5.0	.35@100	10	3@1.0/1	7@1.0/1				
STA4240	300	6-240@.75/2	1@.75/.075	1.8@.75/.075	2@400	35	5.0	.35@100	15	.5@.75/.075	9@.75/.075				
STA5052	200	25-100@.75/5	1.0@.75/1	1.2@.75/5	.5@200	40	3.75	2@20	10	.3@.75/1	4.7@.75/1				
STA9250	350	10-200@1/2	1@1/1.75	1.8@1/1	1.0@400	35	5.0	.35@100	30	.5@1/1	2.5@1/1				
STA40313	300( $V_{CE}$ )	>40@.5/10		1.5@1/10	10@300	35	5.0	.15@150							
STA40316	300( $V_{CE}$ )	>50@.5/10		1.5@5/10	5@150	35	5.0	.10@150							
STA40322	300( $V_{CE}$ )	>75@.5/10			10@150	35	5.0	.10@150							
STA40328	300( $V_{CE}$ )	>20@1/10		1.5@1/10	10@150	35	5.0	.10@150							
Typical Values	250	10-200@1/2	.6@1/.125	1.2@1/.125	.5@275	35	5.0	.1@150	35	.5@1/1	2@1/1				
NOTE: This product is developmental.															

NOTES:

<sup>1</sup>  $I_{CE}$  @  $V_{CE}$  (mA @ V)

<sup>3</sup>  $V_{BE(SAT)}$  @  $I_C/I_B$  (V @ A/A)



## NPN TO-53

$I_{C(MAX)} = 3.0\text{A}$

$V_{CEO(SUS)} = 60 \text{ to } 80\text{V}$

$f_T = 1.0 \text{ MHz}$

Type #	$V_{CEO(SUS)}$ (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)	$P_D$ @ $T_C = 25^\circ\text{C}$ (Watts)	$\theta_{JC}$ ( $^\circ\text{C/W}$ )	$I_{S/B}$ @ $V_{CE}$ $t = 1\text{sec}$ (A @ V)	$f_T$ (MHz)	Generic Product	General Information
2N389	60( $V_{CE}$ )	12-60@1/15	5@1/2	8@1.5/15	10@60	85	2.2		1.0	2N389 Family. 140 x 140 Mil Chip. Single Diffused Process. Clip Leads. Case 330	General Purpose Power Switch and Amplifier. Industrial and Military Usage.
2N389A	60( $V_{CE}$ )	12-60@1/4	.75@1/2	2.5@1.5/4	10@60	85	2.06		1.0		
2N424	80( $V_{CE}$ )	12-60@1/15	10@1/2	8@.75/15	10@60	85	2.2		1.0		
2N424A	80( $V_{CE}$ )	12-60@1/4	.75@1/2	2.5@1.5/4	10@60	85	2.06		1.0		
Typical Values	70	15-100@1/4	.6@1/2	1.8@1.5/4	5@60	85	2.2	4.25@20	1.0		

<sup>4</sup> Available with gold plated leads on special request.