



silicon power transistors

NPN TO-61 (isolated collector) (cont'd)

$I_{C(MAX)} = 5 \text{ to } 20\text{A}$ $V_{CE(SUS)} = 60 \text{ to } 350\text{V}$ $f_r = 20 \text{ to } 40 \text{ MHz}$

| 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 |
|-------------------|--------------------------|--|---|---|-------------------------------------|---|---|---|----------------|--|---|---|---|
| STA9760 | 225 | 10-200@10/4 | 2@10/1 | 2.5 ³ @10/1 | .5@225 | 57 | 1.75 | 2.85@20 | 20 | .6@10/1 | 3@10/1 | STA9760 Family. | High Voltage, High Current, High Speed Power Switch and Amplifier. Military Usage. |
| STA9761 | 300 | 10-200@8/4 | 2@8/.8 | 2.5 ³ @8/.8 | 1.0@300 | 57 | 1.75 | 2.85@20 | 20 | .5@8/.8 | 3@8/.8 | 200 x 200 Mil Chip. | |
| STA 9762 | 350 | 10-200@5/4 | 2@5/.5 | 2.5 ³ @5/.5 | 1.0@350 | 57 | 1.75 | 2.85@20 | 20 | .5@5/.5 | 3@5/.5 | Double Epitaxial Process. Ultrasonically Bonded Leads. Case 352 | |
| Typical Values | 275 | 10-200@5/4 | 1@5/.5 | 1.8 ³ @5/.5 | 1@275 | 57 | 1.75 | 2.85@20 | 20 | .5@5/.5 | 2.5@5/.5 | | |

NOTE: This product is developmental.

NOTES:

³ $V_{BE(SAT)}$ @ I_C/I_B (V @ A/A)



NPN TO-82

$I_{C(MAX)} = 7.5 \text{ to } 10\text{A}$

$V_{CE(SUS)} = 30 \text{ to } 250\text{V}$

$f_r = 0.5 \text{ MHz}$

| 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 | | |
|-------------------|--------------------------|--|---|---|-------------------------------------|---|---|---|----------------|--|---|--|--|---|--|
| 2N1015 | 30 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@30 | 71.5 | 0.7 | | | | | 2N1016 Family. 200 x 200 Mil Chip. Single Diffused Process. Clip Leads. Case 540 | High Power Switch and Amplifier. Military Usage. | | |
| 2N1015A | 60 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@60 | 71.5 | 0.7 | | | | | | | | |
| 2N1015B | 100 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@100 | 71.5 | 0.7 | | | | | | | | |
| 2N1015C | 150 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@150 | 71.5 | 0.7 | | | | | | | | |
| 2N1015D | 200 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@200 | 71.5 | 0.7 | | | | | | | | |
| 2N1015E | 250 | >10@2/4 | 1.5@2/.3 | 2@2/4 | 20@250 | 71.5 | 0.7 | | | | | | | | |
| 2N1016 | 30 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@30 | 71.5 | 0.7 | | | | | | | | |
| 2N1016A | 60 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@60 | 71.5 | 0.7 | | | | | | | | |
| 2N1016B | 100 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@100 | 71.5 | 0.7 | | | | | | | | |
| 2N1016C | 150 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@150 | 71.5 | 0.7 | | | | | | | | |
| 2N1016D | 200 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@200 | 71.5 | 0.7 | | | | | | | | |
| 2N1016E | 250 | >10@5/4 | 2.5@5/.75 | 2@5/4 | 20@250 | 71.5 | 0.7 | | | | | | | | |
| Typical Values | 175 | 10-100@5/4 | 1.5@5/.75 | 1.8@5/4 | 5@175 | 71.5 | 0.7 | 3@50 | 0.8 | 6@5/1 | 13@5/1 | | | | |
| 2N2226 | 50 | 100-500@9/6 | 3.5@9/.15 | 4@9/6 | 20@50 | 100 | 0.5 | | | | | | | 2N2226 Family. 2 - 170 x 170 Mil Chips in Darlington Configuration. Single Diffused Process. Clip Leads. Case 540 | High Gain, High Power Amplifier and Switch. Military Usage. |
| 2N2227 | 100 | 100-500@9/6 | 3.5@9/.15 | 4@9/6 | 20@100 | 100 | 0.5 | | | | | | | | |
| 2N2228 | 150 | 100-500@9/6 | 3.5@9/.15 | 4@9/6 | 20@150 | 100 | 0.5 | | | | | | | | |
| 2N2229 | 200 | 100-500@9/6 | 3.5@9/.15 | 4@9/6 | 20@200 | 100 | 0.5 | | | | | | | | |
| 2N2230 | 50 | >350@8/6 | 3.5@9/.15 | 4@9/6 | 20@50 | 100 | 0.5 | | | | | | | | |
| 2N2231 | 100 | >350@8/6 | 3.5@9/.15 | 4@9/6 | 20@100 | 100 | 0.5 | | | | | | | | |
| 2N2232 | 150 | >350@8/6 | 3.5@9/.15 | 4@9/6 | 20@150 | 100 | 0.5 | | | | | | | | |
| 2N2233 | 200 | >350@8/6 | 3.5@9/.15 | 4@9/6 | 20@200 | 100 | 0.5 | | | | | | | | |
| Typical Values | 100 | 100-2000@9/6 | 3@9/.15 | 3.5@9/6 | 5@100 | 100 | 0.5 | 3@40 | 0.8 | | | | | | |

NPN TO-63

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

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

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

| 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 | | |
|-------------------|--------------------------|--|---|---|-------------------------------------|---|---|---|----------------|--|---|--|---|---|--|
| 2N2815 | 80 | 10-50@10/3 | 1.5@10/1.5 | 2.5 ³ @10/1.5 | 2@80 | 100 | 1.0 | | 0.6 | 3.5@10/1.5 | 12@10/1.5 | 2N2815 Family. 325 x 325 Mil Chip. Single Diffused Process. Clip Leads. Case 530 | High Current, High Power Switch and Amplifier. Military Usage. | | |
| 2N2816 | 100 | 10-50@10/3 | 1.5@10/1.5 | 2.5 ³ @10/1.5 | 2@100 | 100 | 1.0 | | 0.6 | 3.5@10/1.5 | 12@10/1.5 | | | | |
| 2N2817 | 150 | 10-50@10/3 | 1.5@10/1.5 | 2.5 ³ @10/1.5 | 2@150 | 100 | 1.0 | | 0.6 | 3.5@10/1.5 | 12@10/1.5 | | | | |
| 2N2818 | 200 | 10-50@10/3 | 1.5@10/1.5 | 2.5 ³ @10/1.5 | 2@200 | 100 | 1.0 | | 0.6 | 3.5@10/1.5 | 12@10/1.5 | | | | |
| 2N2819 | 80 | 10-50@15/3 | 1.5@15/2.2 | 2.5 ³ @15/2.2 | 2@80 | 100 | 1.0 | | 0.6 | 3.5@15/2.2 | 12@15/2.2 | | | | |
| 2N2820 | 100 | 10-50@15/3 | 1.5@15/2.2 | 2.5 ³ @15/2.2 | 2@100 | 100 | 1.0 | | 0.6 | 3.5@15/2.2 | 12@15/2.2 | | | | |
| 2N2821 | 150 | 10-50@15/3 | 1.5@15/2.2 | 2.5 ³ @15/2.2 | 2@150 | 100 | 1.0 | | 0.6 | 3.5@15/2.2 | 12@15/2.2 | | | | |
| 2N2822 | 200 | 10-50@15/3 | 1.5@15/2.2 | 2.5 ³ @15/2.2 | 2@200 | 100 | 1.0 | | 0.6 | 3.5@15/2.2 | 12@15/2.2 | | | | |
| 2N2823 | 80 | 10-40@20/2 | 1.1@20/3 | 2.1 ³ @20/3 | 2@80 | 100 | 1.0 | | 0.6 | 3.5@20/3 | 12@20/3 | | | | |
| 2N2824 | 100 | 10-40@20/2 | 1.1@20/3 | 2.1 ³ @20/3 | 2@100 | 100 | 1.0 | | 0.6 | 3.5@20/3 | 12@20/3 | | | | |
| 2N2825 | 150 | 10-40@20/2 | 1.1@20/3 | 2.1 ³ @20/3 | 2@150 | 100 | 1.0 | | 0.6 | 3.5@20/3 | 12@20/3 | | | | |
| Typical Values | 125 | 10-100@15/3 | 1.2@15/2.2 | 1.9 ³ @15/2.2 | 1@125 | 100 | 1.0 | 3@50 | 0.6 | 3@15/2.2 | 10@15/2.2 | | | | |
| STA3265 | 90 | 25-55@15/2 | 1@20/2 | 1.8 ³ @20/2 | 20@150 | 100 | 1.0 | .35@75 | 20 | .5@15/1.2 | 2@15/1.2 | | | STA3265 Family. 200 x 200 Mil Chip. Double Epitaxial Process. Ultrasonically Bonded Leads. Case 531 | High Current, High Speed Power Switch and Amplifier. Military Usage. |
| STA3266 | 60 | 20-80@15/3 | 1.6@20/2 | 2.2 ³ @20/2 | 20@120 | 100 | 1.0 | .70@50 | 20 | .5@15/1.2 | 2@15/1.2 | | | | |
| STA8860 | 140 | 20-200@12/3 | 1.5@12/1.2 | 1.8 ³ @12/1.2 | 5@140 | 100 | 1.0 | | 30 | .5@12/1.2 | 1@12/1.2 | | | | |
| Typical Values | 120 | 20-200@12/3 | 1.8@12/1.2 | 1.5 ³ @12/1.2 | 1@120 | 100 | 1.0 | .7@50 | 30 | .4@12/1.2 | 1@12/1.2 | | | | |

NOTE: This product is developmental.

³ $V_{BE(SAT)}$ @ I_C/I_B (V @ A/A)