

NPN & PNP HIGH VOLTAGE SILICON HIGH POWER TRANSISTORS

T-33-01

| STI Type               | Industry Type | Power Dissipation @ 25 °C (watts) | V <sub>CEV</sub> (volts) | V <sub>CEO</sub> (volts) | I <sub>CEV</sub> |     | h <sub>FE</sub> @ I <sub>C</sub> |     | V <sub>CE(SAT.)</sub> V <sub>BE(SAT.)</sub> @ I <sub>C</sub> |         |     | COB pF | f <sub>T</sub> (MHz) | CASE STYLE        |
|------------------------|---------------|-----------------------------------|--------------------------|--------------------------|------------------|-----|----------------------------------|-----|--|---------|-----|--------|----------------------|-------------------|
|                        |               |                                   |                          |                          | (volts)          | mA  | (Min.)                           | A   | (volts)  | (volts) | A   |        |                      |                   |
| ST-559                 | TIP-559       | 150                               | 400                      | 300                      | 400              | .25 | 10                               | 1.0 | 2.0  | 2.0     | 2.0 | —      | 5.0                  | TO-3              |
| ST-560                 | TIP-560       | 150                               | 450                      | 350                      | 450              | .25 | 10                               | 1.0 | 2.0  | 2.0     | 2.0 | —      | 5.0                  | TO-3              |
| ST-561                 | TIP-561       | 150                               | 500                      | 400                      | 500              | .25 | 10                               | 1.0 | 2.0  | 2.0     | 2.0 | —      | 5.0                  | TO-3              |
| ST-562                 | TIP-562       | 150                               | 300                      | 300                      | 300              | .25 | 20                               | 1.0 | 2.0  | 2.0     | 3.0 | —      | 5.0                  | TO-3              |
| ST-563                 | TIP-563       | 150                               | 400                      | 400                      | 400              | .25 | 20                               | 1.0 | 2.0  | 2.0     | 3.0 | —      | 5.0                  | TO-3              |
| ST-575                 | TIP-575       | 100                               | 350                      | 200                      | 350              | .25 | 30                               | .50 | 1.0  | 1.0     | 3.0 | —      | 10                   | TO-3              |
| ST-575A                | TIP-575A      | 100                               | 400                      | 250                      | 400              | .25 | 30                               | .50 | 1.0  | 1.0     | 3.0 | —      | 10                   | TO-3              |
| ST-575B                | TIP-575B      | 100                               | 450                      | 300                      | 450              | .25 | 30                               | .50 | 1.0  | 1.0     | 3.0 | —      | 10                   | TO-3              |
| ST-575C                | TIP-575C      | 100                               | 500                      | 400                      | 500              | .25 | 30                               | .50 | 1.0  | 1.0     | 3.0 | —      | 10                   | TO-3              |
| ST-660*                | TIP-660       | 80                                | 320                      | 320                      | 320              | 1.0 | 200                              | 4.0 | 2.8  | 2.2     | 6.5 | —      | —                    | TO-3              |
| ST-661*                | TIP-661       | 80                                | 350                      | 350                      | 350              | 1.0 | 200                              | 4.0 | 2.8  | 2.2     | 6.5 | —      | —                    | TO-3              |
| ST-662*                | TIP-662       | 80                                | 380                      | 380                      | 380              | 1.0 | 200                              | 4.0 | 2.8  | 2.2     | 6.5 | —      | —                    | TO-3              |
| ST-663*                | TIP-663       | 150                               | 400                      | 300                      | 350              | .25 | 500                              | 5.0 | 3.0  | 2.5     | 20  | 250    | 10                   | TO-3              |
| ST-664*                | TIP-664       | 150                               | 450                      | 350                      | 400              | .25 | 500                              | 5.0 | 3.0  | 2.5     | 20  | 250    | 10                   | TO-3              |
| ST-665*                | TIP-665       | 150                               | 500                      | 400                      | 450              | .25 | 500                              | 5.0 | 3.0  | 2.5     | 20  | 250    | 10                   | TO-3              |
| ST-666*                | TIP-666       | 150                               | 400                      | 300                      | 350              | .25 | 40                               | 2.5 | 2.8  | 2.2     | 5.0 | —      | 10                   | TO-3              |
| ST-667*                | TIP-667       | 150                               | 450                      | 350                      | 400              | .25 | 40                               | 2.5 | 2.8  | 2.2     | 5.0 | —      | 10                   | TO-3              |
| ST-668*                | TIP-668       | 150                               | 550                      | 450                      | 450              | .25 | 40                               | 2.5 | 2.8  | 2.2     | 5.0 | —      | 10                   | TO-3              |
| ST-3040*               | MJ-3040       | 175                               | 400                      | 300                      | 400              | 1.0 | 100                              | 2.5 | 2.5  | 3.0     | 5.0 | —      | —                    | TO-3              |
| ST-3041*               | MJ-3041       | 175                               | 400                      | 300                      | 400              | 1.0 | 250                              | 2.5 | 2.5  | 3.0     | 5.0 | —      | —                    | TO-3              |
| ST-3042*               | MJ-3042       | 175                               | 500                      | 350                      | 500              | 1.0 | 250                              | 2.5 | 2.5  | 3.0     | 5.0 | —      | —                    | TO-3              |
| ST-6000*               | IR-6000       | 125                               | 400                      | 400                      | 400              | 1.0 | 100                              | 5.0 | 1.8  | 2.5     | 15  | —      | 8.0                  | TO-3              |
| ST-6001*               | IR-6001       | 125                               | 450                      | 450                      | 450              | 1.0 | 100                              | 5.0 | 1.8  | 2.5     | 15  | —      | 8.0                  | TO-3              |
| ST-6002*               | IR-6002       | 125                               | 500                      | 500                      | 500              | 1.0 | 100                              | 5.0 | 1.8  | 2.5     | 15  | —      | 8.0                  | TO-3              |
| ST-6060* <sup>2</sup>  | IR-6060       | 125                               | 350                      | 350                      | 350              | 1.0 | 100                              | 10  | 2.0  | 3.5     | 20  | —      | 8.0                  | TO-3              |
| ST-6061* <sup>2</sup>  | IR-6061       | 125                               | 400                      | 400                      | 400              | 1.0 | 100                              | 10  | 2.0  | 3.5     | 20  | —      | 8.0                  | TO-3              |
| ST-6062* <sup>2</sup>  | IR-6062       | 125                               | 450                      | 450                      | 450              | 1.0 | 100                              | 10  | 2.0  | 3.5     | 20  | —      | 8.0                  | TO-3              |
| ST-6503 <sup>1</sup>   | MJ-6503       | 125                               | 450                      | 400                      | 450              | .50 | 15                               | 2.0 | 1.5  | 1.5     | 4.0 | 400    | —                    | TO-3              |
| ST-8500                | MJ-8500       | 125                               | 1200                     | 700                      | 1200             | .25 | 7.5                              | 1.0 | 2.0  | 1.5     | 1.0 | 250    | —                    | TO-3              |
| ST-8501                | MJ-8501       | 125                               | 1400                     | 800                      | 1400             | .25 | 7.5                              | 1.0 | 2.0  | 1.5     | 1.0 | 250    | —                    | TO-3              |
| ST-8502                | MJ-8502       | 150                               | 1200                     | 700                      | 1200             | .25 | 7.5                              | 1.0 | 2.0  | 1.5     | 2.5 | 300    | —                    | TO-3              |
| ST-8503                | MJ-8503       | 150                               | 1400                     | 800                      | 1400             | .25 | 7.5                              | 1.0 | 2.0  | 1.5     | 2.5 | 300    | —                    | TO-3              |
| ST-8504                | MJ-8504       | 175                               | 1200                     | 700                      | 1200             | .25 | 7.5                              | 1.5 | 2.0  | 1.5     | 5.0 | 450    | —                    | TO-3              |
| ST-8505                | MJ-8505       | 175                               | 1400                     | 800                      | 1400             | .25 | 7.5                              | 1.5 | 2.0  | 1.5     | 5.0 | 450    | —                    | TO-3              |
| ST-10000*              | MJ-10000      | 175                               | 400                      | 350                      | 400              | .25 | 40                               | 10  | 1.9  | 2.5     | 10  | 325    | 10                   | TO-3              |
| ST-10001*              | MJ-10001      | 175                               | 450                      | 400                      | 450              | .25 | 40                               | 10  | 1.9  | 2.5     | 10  | 325    | 10                   | TO-3              |
| ST-10002*              | MJ-10002      | 150                               | 400                      | 350                      | 400              | .25 | 30                               | 5.0 | 1.9  | 2.5     | 5.0 | 275    | 10                   | TO-3              |
| ST-10003*              | MJ-10003      | 150                               | 450                      | 400                      | 450              | .25 | 30                               | 5.0 | 1.9  | 2.5     | 5.0 | 275    | 10                   | TO-3              |
| ST-10004* <sup>2</sup> | MJ-10004      | 175                               | 400                      | 350                      | 400              | .25 | 50                               | 5.0 | 1.9  | 2.5     | 5.0 | 325    | 10                   | TO-3              |
| ST-10005* <sup>2</sup> | MJ-10005      | 175                               | 450                      | 400                      | 450              | .25 | 50                               | 5.0 | 1.9  | 2.5     | 5.0 | 325    | 10                   | TO-3              |
| ST-10006* <sup>2</sup> | MJ-10006      | 150                               | 400                      | 350                      | 400              | .25 | 40                               | 2.5 | 1.9  | 2.5     | 5.0 | 275    | 10                   | TO-3              |
| ST-10007* <sup>2</sup> | MJ-10007      | 150                               | 450                      | 400                      | 450              | .25 | 40                               | 2.5 | 1.9  | 2.5     | 5.0 | 275    | 10                   | TO-3              |
| ST-10008* <sup>2</sup> | MJ-10008      | 175                               | 450                      | 450                      | 450              | .25 | 30                               | 10  | 2.0  | 2.5     | 10  | 325    | 8.0                  | TO-3              |
| ST-10009* <sup>2</sup> | MJ-10009      | 175                               | 500                      | 500                      | 500              | .25 | 30                               | 10  | 2.0  | 2.5     | 10  | 325    | 8.0                  | TO-3              |
| ST-10011*              | MJ-10011      | 80                                | 1400                     | 700                      | 1400             | .25 | 20                               | 4.0 | 3.0  | 2.0     | 3.5 | —      | —                    | TO-3              |
| ST-10012*              | MJ-10012      | 175                               | 550                      | 400                      | 550              | 1.0 | 20                               | 10  | 2.5  | 3.0     | 10  | 350    | —                    | TO-3              |
| ST-10013* <sup>2</sup> | MJ-10013      | 175                               | 650                      | 550                      | 650              | .30 | 10                               | 10  | 2.5  | 3.0     | 10  | 350    | 10                   | TO-3              |
| ST-10014* <sup>2</sup> | MJ-10014      | 175                               | 700                      | 600                      | 700              | .30 | 10                               | 10  | 2.5  | 3.0     | 10  | 350    | 10                   | TO-3              |
| ST-10015*              | MJ-10015      | 250                               | 600                      | 400                      | 600              | .25 | 10                               | 40  | 2.2  | 2.7     | 20  | 750    | —                    | TO-3              |
| ST-10016*              | MJ-10016      | 250                               | 700                      | 500                      | 700              | .25 | 10                               | 40  | 2.2  | 2.7     | 20  | 750    | —                    | TO-3              |
| ST-10022*              | MJ-10022      | 250                               | 450                      | 350                      | 450              | .25 | 50                               | 10  | 2.2  | 2.5     | 20  | 600    | —                    | TO-3 <sup>3</sup> |
| ST-10023*              | MJ-10023      | 250                               | 600                      | 400                      | 600              | .25 | 50                               | 10  | 2.2  | 2.5     | 20  | 600    | —                    | TO-3 <sup>3</sup> |
| ST-12002               | MJ-12002      | 75                                | 1500                     | 750                      | 1500             | 1.0 | 10                               | 1.0 | 5.0  | 1.5     | 2.0 | 50     | 4.0                  | TO-3              |
| ST-12003               | MJ-12003      | 100                               | 1500                     | 750                      | 1500             | 1.0 | 10                               | 2.0 | 5.0  | 1.5     | 3.0 | 90     | 4.0                  | TO-3              |
| ST-12004               | MJ-12004      | 100                               | 1500                     | 750                      | 1500             | 1.0 | 10                               | 3.0 | 5.0  | 1.5     | 4.5 | 125    | 4.0                  | TO-3              |
| ST-12005               | MJ-12005      | 100                               | 1500                     | 750                      | 1500             | .25 | 5.0                              | 5.0 | 5.0  | 1.5     | 5.0 | 150    | 6.0                  | TO-3              |
| ST-12010               | MJ-12010      | 100                               | 950                      | 400                      | 950              | 1.0 | 4.0                              | 5.0 | 5.0  | 1.5     | 5.0 | 350    | —                    | TO-3              |
| ST-13014               | MJ-13014      | 150                               | 550                      | 350                      | 550              | .50 | 12                               | 2.5 | 1.4  | 1.5     | 5.0 | 350    | —                    | TO-3              |
| ST-13015               | MJ-13015      | 150                               | 600                      | 400                      | 600              | .50 | 12                               | 2.5 | 1.4  | 1.5     | 5.0 | 350    | —                    | TO-3              |
| ST-13070               | MJ-13070      | 150                               | 650                      | 400                      | 650              | .50 | 8.0                              | 3.0 | 1.0  | 1.5     | 3.0 | 250    | —                    | TO-3              |

\*DARLINGTON TRANSISTOR  
 \*\*V<sub>CEO</sub>  
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 \*PNP  
<sup>3</sup>SPEED UP DIODE  
<sup>2</sup>PINS .058" ± .002"