

|              |       |                                                  |                        |                        |   |                       |                        |                        |                        |                         |    |      |                              |                       |     |              |
|--------------|-------|--------------------------------------------------|------------------------|------------------------|---|-----------------------|------------------------|------------------------|------------------------|-------------------------|----|------|------------------------------|-----------------------|-----|--------------|
| 2 SC 2 8 5 7 | NP    | High Voltage Driver                              | 180                    | 180                    | 5 | 59m                   | 500m                   | 150                    | 180                    | 1.0 $\mu$               | 10 | 10m  | 40~320                       | 30                    | 10m | >50          |
| 2 SA 1 2 0 7 | NP    | High Voltage Switching<br>AF 60W Amp. Predriver  | 180                    | 160                    | 5 | 70m                   | 600m                   | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SC 2 9 0 9 | NP    | High Voltage Switching<br>AF 60W Amp. Predriver  | 180                    | 160                    | 5 | 70m                   | 600m                   | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SA 1 3 1 9 | NP    | High Voltage Switching                           | 180                    | 160                    | 6 | 0.7                   | 700m                   | 150                    | 120                    | 0.1 $\mu$               | 5  | 100m | 100~400                      | -                     | -   | -            |
| 2 SC 3 3 3 2 | NP    | High Voltage Switching                           | 180                    | 160                    | 6 | 0.7                   | 700m                   | 150                    | 120                    | 0.1 $\mu$               | 5  | 100m | 100~400                      | -                     | -   | -            |
| 2 SK 2 2 3   | NP    | High Voltage Driver                              | V <sub>DSS</sub><br>80 | V <sub>GDS</sub><br>80 | - | I <sub>G</sub><br>10m | P <sub>D</sub><br>400m | V <sub>GS</sub><br>125 | I <sub>GSS</sub><br>30 | V <sub>DS</sub><br>1.0n | 30 | -    | I <sub>DSS</sub><br>1.2~24mA | V <sub>DS</sub><br>30 | -   | ciss<br>12pF |
| 2 SA 1 2 0 8 | MP    | High Voltage Switching<br>AF 80W Amp. Predriver  | 180                    | 160                    | 5 | 70m                   | 900m                   | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SC 2 9 1 0 | MP    | High Voltage Switching<br>AF 80W Amp. Predriver  | 180                    | 160                    | 5 | 70m                   | 900m                   | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SA 1 2 0 9 | T0126 | High Voltage Switching<br>AF 100W Amp. Predriver | 180                    | 160                    | 5 | 140m                  | 10*                    | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SC 2 9 1 1 | T0126 | High Voltage Switching<br>AF 100W Amp. Predriver | 180                    | 160                    | 5 | 140m                  | 10*                    | 150                    | 80                     | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SA 1 2 4 8 | T0126 | High Voltage Switching                           | 180                    | 160                    | 6 | 0.7                   | 10*                    | 150                    | 120                    | 0.1 $\mu$               | 5  | 100m | 100~400                      | 10                    | 50m | 120          |
| 2 SC 3 1 1 6 | T0126 | High Voltage Switching                           | 180                    | 160                    | 6 | 0.7                   | 10*                    | 150                    | 120                    | 0.1 $\mu$               | 5  | 100m | 100~400                      | 10                    | 50m | 120          |
| 2 SA 1 2 4 9 | T0126 | High Voltage Switching                           | 180                    | 160                    | 6 | 1.5                   | 10*                    | 150                    | 120                    | 1.0 $\mu$               | 5  | 100m | 100~400                      | 10                    | 50m | 120          |
| 2 SC 3 1 1 7 | T0126 | High Voltage Switching                           | 180                    | 160                    | 6 | 1.5                   | 10*                    | 150                    | 120                    | 1.0 $\mu$               | 5  | 100m | 100~400                      | 10                    | 50m | 120          |
| 2 SA 1 2 1 0 | T0126 | High Voltage Switching<br>AF 150W Amp. Predriver | 200                    | 200                    | 5 | 140m                  | 10*                    | 150                    | 160                    | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |
| 2 SC 2 9 1 2 | T0126 | High Voltage Switching<br>AF 150W Amp. Predriver | 200                    | 200                    | 5 | 140m                  | 10*                    | 150                    | 160                    | 0.1 $\mu$               | 5  | 10m  | 100~400                      | 10                    | 10m | 150          |

## LOW SATURATION VOLTAGE APPLICATIONS

(Classified by package and arranged in order of increasing V<sub>CEO</sub>, I<sub>C</sub>. Minus sign for PNP is omitted due to space limitations.)

| Type Number  | Case | Applications            | Absolute Maximum Ratings/Ta=25°C |                  |                |                            |                | Electrical Characteristics/Ta=25°C |                       |             |                        |                       |         |                        |                       |       |
|--------------|------|-------------------------|----------------------------------|------------------|----------------|----------------------------|----------------|------------------------------------|-----------------------|-------------|------------------------|-----------------------|---------|------------------------|-----------------------|-------|
|              |      |                         | V <sub>CEO</sub>                 | V <sub>CEO</sub> | I <sub>C</sub> | P <sub>C</sub><br>*TC=25°C | T <sub>j</sub> | V <sub>CE(sat)</sub>               |                       |             | h <sub>FE</sub>        |                       |         | f <sub>T</sub>         |                       |       |
|              |      |                         | [V]                              | [V]              | [A]            | [W]                        | [°C]           | I <sub>C</sub><br>[A]              | I <sub>B</sub><br>[A] | *max<br>[V] | V <sub>CE</sub><br>[V] | I <sub>C</sub><br>[A] |         | V <sub>CE</sub><br>[V] | I <sub>C</sub><br>[A] | [MHz] |
| 2 SB 8 1 5   | CP   | AF Power Amp.           | 20                               | 15               | 0.7            | 200m                       | 125            | 5m                                 | 0.5m                  | 15m         | 2                      | 50m                   | 200~600 | 10                     | 50m                   | 250   |
| 2 SD 1 0 4 8 | CP   | AF Power Amp.           | 20                               | 15               | 0.7            | 200m                       | 125            | 5m                                 | 0.5m                  | 10m         | 2                      | 50m                   | 200~900 | 10                     | 50m                   | 250   |
| 2 SB 1 1 1 8 | PCP  | Converter, Switching    | 20                               | 15               | 0.7            | 1.3                        | -              | 5m                                 | 0.5m                  | 15m         | 2                      | 50m                   | 140~800 | 10                     | 50m                   | 250   |
| 2 SD 1 6 1 8 | PCP  | Converter, Switching    | 20                               | 15               | 0.7            | 1.3                        | -              | 5m                                 | 0.5m                  | 10m         | 2                      | 50m                   | 140~800 | 10                     | 50m                   | 250   |
| 2 SB 1 1 1 9 | PCP  | Switching, Driver       | 25                               | 25               | 1              | 1.3                        | -              | 500m                               | 50m                   | 0.15        | 2                      | 50m                   | 100~560 | 10                     | 50m                   | 180   |
| 2 SD 1 6 1 9 | PCP  | Switching, Driver       | 25                               | 25               | 1              | 1.3                        | -              | 500m                               | 50m                   | 0.1         | 2                      | 50m                   | 100~560 | 10                     | 50m                   | 180   |
| 2 SB 1 1 2 0 | PCP  | Strobe (3V max)         | 20                               | 10               | 2.5            | 1.3                        | -              | 1.5                                | 150m                  | 0.25        | 2                      | 500m                  | 100~560 | 10                     | 50m                   | 250   |
| 2 SD 1 6 2 0 | PCP  | Strobe (3V max)         | 30                               | 10               | 3              | 1.3                        | -              | 3                                  | 60m                   | 0.3         | 2                      | 3                     | >140    | 10                     | 50m                   | 200   |
| 2 SB 1 1 2 1 | PCP  | Large Current Switching | 30                               | 25               | 2              | 1.3                        | -              | 1.5                                | 75m                   | 0.35        | 2                      | 100m                  | 100~560 | 10                     | 50m                   | 150   |
| 2 SD 1 6 2 1 | PCP  | Large Current Switching | 30                               | 25               | 2              | 1.3                        | -              | 1.5                                | 75m                   | 0.18        | 2                      | 100m                  | 100~560 | 10                     | 50m                   | 150   |

Continued on next page.