



# MOLD TYPE BIPOLAR TRANSISTORS

## Ratings and Specifications



### 1 High speed switching transistors

- Suitable for 50kHz class switching regulators
- Allows transformers to be reduced in size

| Device type | V <sub>CB0</sub> | V <sub>CE0</sub> | V <sub>CE0</sub> (sus) | I <sub>c</sub> cont. | P <sub>c</sub> | h <sub>FE</sub> min.  | I <sub>c</sub> Amps | V <sub>CE</sub> Volts | Switching time (Max.)  |                      |     | Package   | Net mass Grams |
|-------------|------------------|------------------|------------------------|----------------------|----------------|-----------------------|---------------------|-----------------------|------------------------|----------------------|-----|-----------|----------------|
|             | Volts            | Volts            | Volts                  | Amps                 | Watts          | t <sub>on</sub> μsec. |                     |                       | t <sub>stg</sub> μsec. | t <sub>r</sub> μsec. |     |           |                |
| 2SC2438     | 150              | 80               | 80                     | 7                    | 50             | 60                    | 1                   | 1                     | 0.5                    | 2.5                  | 0.3 | TO-220AB  | 2              |
| 2SC4383     | 200              | 180              | 180                    | 8                    | 40             | 30                    | 3                   | 4                     | 2.0                    | 4.0                  | 1.0 | TO-220F17 | 2.5            |
| 2SC2767     | 300              | 200              | 200                    | 5                    | 60             | 20                    | 1                   | 5                     | 1.0                    | 2.0                  | 1.0 | TO-220AB  | 2              |
| 2SC2768     | 250              | 200              | 200                    | 10                   | 50             | 25                    | 2                   | 5                     | 0.8                    | 2.0                  | 0.5 | TO-220AB  | 2              |
| 2SC2769     | 300              | 200              | 200                    | 10                   | 100            | 20                    | 2                   | 5                     | 0.8                    | 2.0                  | 0.5 | TO-3P     | 6              |
| 2SC2944     | 250              | 200              | 200                    | 15                   | 100            | 20                    | 2                   | 5                     | 0.8                    | 1.5                  | 0.4 | TO-3P     | 6              |
| 2SC2626     | 400              | 300              | 300                    | 15                   | 80             | 10                    | 6                   | 5                     | 0.8                    | 2.0                  | 0.8 | TO-3P     | 6              |
| 2SC2440     | 450              | 400              | 400                    | 5                    | 40             | 15                    | 2                   | 5                     | 1.5                    | 4.0                  | 1.3 | TO-220AB  | 2              |
| 2SC3723     | 450              | 400              | 400                    | 5                    | 40             | 10                    | 2                   | 5                     | 1.0                    | 2.5                  | 0.5 | TO-220AB  | 2              |
| 2SC3822     | 450              | 400              | 400                    | 5                    | 30             | 10                    | 2                   | 5                     | 1.0                    | 2.5                  | 0.5 | TO-220F17 | 2.5            |
| 2SC3821     | 450              | 400              | 400                    | 5                    | 40             | 10                    | 2                   | 5                     | 1.0                    | 2.5                  | 1.0 | TO-220F17 | 2.5            |
| 2SC4242     | 450              | 400              | 400                    | 7                    | 40             | 10                    | 4                   | 5                     | 1.0                    | 2.5                  | 0.5 | TO-220AB  | 2              |
| 2SC4977     | 450              | 400              | 400                    | 7                    | 40             | 10                    | 4                   | 5                     | 1.0                    | 2.5                  | 0.5 | TO-220F15 | 2.5            |
| 2SC2625     | 450              | 400              | 400                    | 10                   | 80             | 10                    | 4                   | 5                     | 1.0                    | 2.0                  | 1.0 | TO-3P     | 6              |
| 2SC2929     | 500              | 400              | 400                    | 3                    | 60             | 20                    | 0.5                 | 5                     | 1.5                    | 2.0                  | 0.8 | TO-220AB  | 2              |
| 2SC4622     | 500              | 400              | 400                    | 7                    | 40             | 10                    | 4                   | 5                     | 1.0                    | 2.5                  | 0.5 | TO-220AB  | 2              |
| 2SC4795     | 500              | 400              | 400                    | 30                   | 120            | 20                    | 12                  | 5                     | 1.0                    | 2.5                  | 0.5 | TO-3P     | 6              |
| 2SC2542     | 650              | 400              | 400                    | 5                    | 60             | 10                    | 2                   | 5                     | 1.0                    | 2.0                  | 1.0 | TO-220AB  | 2              |
| 2SC4786     | 900              | 500              | 500                    | 5                    | 40             | 20                    | 1                   | 5                     | 1.0                    | 4.0                  | 0.5 | TO-220F15 | 2.5            |
| 2SC3047     | 850              | 500              | 500                    | 6                    | 40             | 15                    | 0.5                 | 5                     | 1.0                    | 3.0                  | 1.0 | TO-220AB  | 2              |
| ET405       | 450              | 400              | 400                    | 10                   | 80             | 10                    | 4                   | 5                     | 1.0                    | 2.0                  | 1.0 | TO-3PF    | 6              |
| ET403       | 850              | 500              | 500                    | 6                    | 40             | 15                    | 0.5                 | 5                     | 1.0                    | 3.0                  | 1.0 | TO-220F17 | 2.5            |
| ET206       | 850              | 500              | 500                    | 10                   | 80             | 15                    | 1                   | 5                     | 1.0                    | 3.5                  | 1.0 | TO-3P     | 6              |

#### Letter symbols

V<sub>CB0</sub>: Collector-to-base voltage (Emitter open)  
 V<sub>CE0</sub>: Collector-to-emitter voltage (Base open)  
 V<sub>CE</sub>: Collector-to-emitter saturation voltage

V<sub>CE0</sub> (sus): Collector-to-emitter sustaining voltage (Base open)  
 V<sub>CEX</sub> (sus): Collector-to-emitter sustaining voltage (Base reverse bias)  
 I<sub>c</sub> (cont): Collector-current (continuous)  
 P<sub>c</sub>: Maximum power dissipation

h<sub>FE</sub>: DC current gain  
 t<sub>on</sub>: Turn-on time  
 t<sub>stg</sub>: Storage time  
 t<sub>r</sub>: Fall time  
 SOA: Safe operating area

