

# 2SD2318

- 1) High DC current gain.
- 2) Low saturation voltage.  
(Typ.  $V_{CE(sat)} = 0.5V$  at  $I_C / I_B = 2A / 0.5A$ )
- 3) Complements the 2SB1639.

| Parameter                   | Symbol         | Limits          | Unit                          |
|-----------------------------|----------------|-----------------|-------------------------------|
| Collector-base voltage      | $V_{CB0}$      | 80              | V                             |
| Collector-emitter voltage   | $V_{CE0}$      | 60              | V                             |
| Emitter-base voltage        | $V_{EB0}$      | 6               | V                             |
| Collector current           | $I_c$          | 3               | A                             |
|                             |                | 4.5             | A(Pulse) ★                    |
| Collector power dissipation | $P_c$          | 1               | W                             |
|                             |                | 15              | W( $T_c=25^{\circ}\text{C}$ ) |
| Junction temperature        | $T_{j\text{}}$ | 150             | $^{\circ}\text{C}$            |
| Storage temperature         | $T_{stg}$      | $-55 \sim +150$ | $^{\circ}\text{C}$            |

The drawing shows the mechanical specifications for the ROHM CPT3 EIAJ SC-63 package. The top view (left) shows a rectangular package with dimensions: total width 2.3 mm, base width 0.65 mm, and a central gate width of 0.9 mm. The side view (right) shows a package with a total height of 2.3 mm, a base thickness of 0.5 mm, and a central gate height of 0.9 mm. The package is labeled with (3) (2) (1) on the top view and (1) (2) (3) on the side view.

ROHM : CPT3  
EIAJ : SC-63

- (1) Base/Gate
- (2) Collector/Drain
- (3) Emitter/Source

|                              |         |
|------------------------------|---------|
| Type                         | 2SD2318 |
| Package                      | CPT3    |
| h <sub>FE</sub>              | UV      |
| Code                         | TL      |
| Basic ordering unit (pieces) | 2500    |

| Parameter                            | Symbol          | Min. | Typ. | Max. | Unit    | Conditions                      |
|--------------------------------------|-----------------|------|------|------|---------|---------------------------------|
| Collector-base breakdown voltage     | $BV_{CBO}$      | 80   | -    | -    | V       | $I_C=50\mu A$                   |
| Collector-emitter breakdown voltage  | $BV_{CEO}$      | 60   | -    | -    | V       | $I_C=1mA$                       |
| Emitter-base breakdown voltage       | $BV_{EBO}$      | 6    | -    | -    | V       | $I_E=50\mu A$                   |
| Collector cutoff current             | $I_{CBO}$       | -    | -    | 100  | $\mu A$ | $V_{CB}=80V$                    |
| Emitter cutoff current               | $I_{EBO}$       | -    | -    | 100  | $\mu A$ | $V_{EB}=6V$                     |
| Collector-emitter saturation voltage | $V_{CE(sat)}$   | -    | -    | 1.0  | V       | $I_C/I_E=2A/0.05A$              |
| Base-emitter saturation voltage      | $V_{BE(sat)}$   | -    | -    | 1.5  | V       | $I_C/I_E=2A/0.05A$              |
| DC current transfer ratio            | $h_{FE}$        | 560  | -    | 1800 | -       | $V_{CE}=4V/0.5A$                |
| Transition frequency                 | f <sub>T</sub>  | -    | 50   | -    | MHz     | $V_{CE}=5V, I_E=-0.2A, f=10MHz$ |
| Output capacitance                   | C <sub>ob</sub> | -    | 60   | -    | pF      | $V_{CB}=10V, I_E=0A, f=1MHz$    |

\* Measured using pulse current.

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