

Medium Power Transistor (25V, 1.2A)

2SD2537 / 2SD2171S

●Features

- 1) High DC current gain.
- 2) High emitter-base voltage. ($V_{CE0}=12V$ Min.)
- 3) Low $V_{CE(sat)}$. (Max. 0.3V at $I_C/I_E=500/10mA$)

●Packaging specifications and h_{FE}

| Type | 2SD2537 | 2SD2171S |
|------------------------------|---------|----------|
| Package | MPT3 | SPT |
| h_{FE} | VW | V |
| Marking | DV* | — |
| Code | T100 | TP |
| Basic ordering unit (pieces) | 1000 | 5000 |

* Denotes h_{FE}

●Electrical characteristics ($T_a=25^\circ C$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|---------|-------------------------------------|
| Collector-base breakdown voltage | BV_{CBO} | 30 | — | — | V | $I_C=10\mu A$ |
| Collector-emitter breakdown voltage | BV_{CEO} | 25 | — | — | V | $I_C=1mA$ |
| Emitter-base breakdown voltage | BV_{EBO} | 12 | — | — | V | $I_E=10\mu A$ |
| Collector cutoff current | I_{CBO} | — | — | 0.3 | μA | $V_{CB}=30V$ |
| Emitter cutoff current | I_{EBO} | — | — | 0.3 | μA | $V_{EB}=12V$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | — | — | 0.3 | V | $I_C/I_E=500mA/10mA$ * |
| DC current transfer ratio | h_{FE} | 820 | — | 2700 | — | $V_{CE}/I_C=5V/0.5A$ |
| | | 820 | — | 1800 | — | |
| Transition frequency | f_T | — | 200 | — | MHz | $V_{CE}=10V, I_E=-50mA, f=100MHz$ * |
| Output capacitance | C_{ob} | — | 20 | — | pF | $V_{CB}=10V, I_E=0A, f=1MHz$ |

* Measured using pulse current.

(94L-1061-D212)

●Absolute maximum ratings ($T_a=25^\circ C$)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|-----------|---------|--------------|
| Collector-base voltage | V_{CBO} | 30 | V |
| Collector-emitter voltage | V_{CEO} | 25 | V |
| Emitter-base voltage | V_{EBO} | 12 | V |
| Collector current | I_C | 1.2 | A (DC) |
| | | 2 | A (Pulse) *1 |
| Collector power dissipation | P_C | 2 | W *2 |
| | | 0.3 | |
| Junction temperature | T_J | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55~150 | $^\circ C$ |

*1 Single pulse $P_w=100ms$ *2 On 40 x 40 x 0.7 mm ceramic board.

General Purpose Transistor (50V, 0.15A)

2SD2351 / 2SD2226K / 2SD2227S

●Features

- 1) High DC current gain.
- 2) High emitter-base voltage. ($V_{CBO}=12V$ Min.)
- 3) Low $V_{CE(sat)}$. (Typ. 0.3V at $I_C/I_E=50/5mA$)

●Packaging specifications and h_{FE}

| Type | 2SD2351 | 2SD2226K | 2SD2227S |
|------------------------------|---------|----------|----------|
| Package | UMT3 | SMT3 | SPT |
| h_{FE} | VW | VW | W |
| Marking | BJ* | BJ* | — |
| Code | T106 | T146 | TP |
| Basic ordering unit (pieces) | 3000 | 3000 | 5000 |

* Denotes h_{FE}

●Electrical characteristics ($T_a=25^\circ C$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|---------|------------------------------------|
| Collector-base breakdown voltage | BV_{CBO} | 60 | — | — | V | $I_C=10\mu A$ |
| Collector-emitter breakdown voltage | BV_{CEO} | 50 | — | — | V | $I_C=1mA$ |
| Emitter-base breakdown voltage | BV_{EBO} | 12 | — | — | V | $I_E=10\mu A$ |
| Collector cutoff current | I_{CBO} | — | — | 0.3 | μA | $V_{CB}=50V$ |
| Emitter cutoff current | I_{EBO} | — | — | 0.3 | μA | $V_{EB}=12V$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | — | — | 0.3 | V | $I_C/I_E=50mA/5mA$ * |
| DC current transfer ratio | h_{FE} | 560 | — | 2700 | — | $V_{CE}/I_C=5V/1mA$ * |
| | | 1200 | — | 2700 | — | $V_{CE}/I_C=5V/1mA$ * |
| Transition frequency | f_T | — | 250 | — | MHz | $V_{CE}=5V, I_E=-10mA, f=100MHz$ * |
| Output capacitance | C_{ob} | — | 3.5 | — | pF | $V_{CB}=5V, I_E=0A, f=1MHz$ |

* Measured using pulse current.

●Absolute maximum ratings ($T_a=25^\circ C$)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|-----------|---------|-------------|
| Collector-base voltage | V_{CBO} | 60 | V |
| Collector-emitter voltage | V_{CEO} | 50 | V |
| Emitter-base voltage | V_{EBO} | 12 | V |
| Collector current | I_C | 0.15 | A (DC) |
| | | 0.2 | A (Pulse) * |
| Collector power dissipation | P_C | 0.2 | W |
| | | 0.3 | |
| Junction temperature | T_J | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55~150 | $^\circ C$ |

* Single pulse $P_w=100ms$

(94S-374-D215)

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