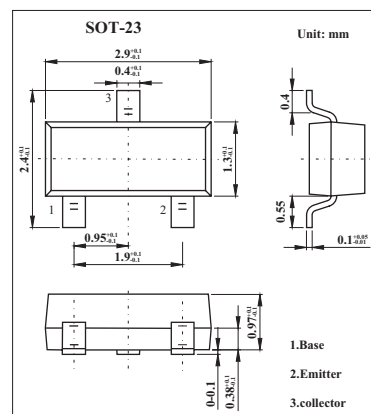


## Power Transistor

## 2SD1757K

## ■ Features

- Low  $V_{CE(sat)}$ . (Typ.8mV at  $I_C/I_B = 10/1mA$ ).
- Optimal for muting.

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                   | Symbol    | Rating      | Unit             |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage      | $V_{CBO}$ | 30          | V                |
| Collector-emitter voltage   | $V_{CEO}$ | 15          | V                |
| Emitter-base voltage        | $V_{EBO}$ | 6.5         | V                |
| Collector current *         | $I_C$     | 0.5         | A                |
| Collector power dissipation | $P_C$     | 0.2         | W                |
| Junction temperature        | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature         | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                            | Symbol        | Testconditons                    | Min | Typ | Max | Unit    |
|--------------------------------------|---------------|----------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $BV_{CBO}$    | $I_C=50\mu A$                    | 30  |     |     | V       |
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | $I_C=1mA$                        | 15  |     |     | V       |
| Emitter-base breakdown voltage       | $BV_{EBO}$    | $I_E=50\mu A$                    | 6.5 |     |     | V       |
| Collector cutoff current             | $I_{CBO}$     | $V_{CB}=20V$                     |     |     | 0.5 | $\mu A$ |
| Emitter cutoff current               | $I_{EBO}$     | $V_{EB}=4V$                      |     |     | 0.5 | $\mu A$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C/I_B=500mA/50mA$             |     | 0.1 | 0.4 | V       |
| DC current transfer ratio            | $h_{FE}$      | $V_{CE}=3V, I_C=100mA$           | 120 |     | 560 |         |
| Output capacitance                   | $f_T$         | $V_{CE}=5V, I_E=-50mA, f=100MHz$ |     | 150 |     | MHz     |
| Transition frequency                 | $C_{ob}$      | $V_{CB}=10V, I_E=0A, f=1MHz$     |     | 15  |     | pF      |

■  $h_{FE}$  Classification

| Marking  | AA      |         |         |
|----------|---------|---------|---------|
| Rank     | Q       | R       | S       |
| $h_{FE}$ | 120~270 | 180~390 | 270~560 |