

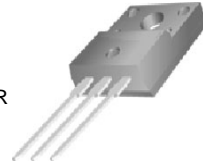
2SD1761 TRANSISTOR (NPN)

FEATURES

- Low collector saturation voltage:
 $V_{ce(sat)}=0.3V(\text{Typ.}), I_C/I_B=2A/0.2A$
- Excellent current characteristics of DC current gain.
- Large collector power dissipation: $P_C=30W(T_C=25^\circ\text{C})$
- Complementary pair with 2SB1187

TO-220F

1. BASE
2. COLLECTOR
3. EMITTER



MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | 60 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 3 | A |
| P_C | Collector Power dissipation | 2 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=50\mu\text{A}, I_E=0$ | 80 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$ | 60 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=50\mu\text{A}, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=60\text{V}, I_E=0$ | | | 10 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4\text{V}, I_C=0$ | | | 10 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=5\text{V}, I_C=0.5\text{A}$ | 60 | | 320 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=2\text{A}, I_B=0.2\text{A}$ | | | 1 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=2\text{A}, I_B=0.2\text{A}$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CE}=5\text{V}, I_C=0.5\text{A}$ | | 8 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | 90 | | pF |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | D | E | F |
|-------|--------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 |

Typical Characteristics

2SD1761

