# 2SD718 TRANSISTOR (NPN)

TO-3P

1.BASE
2.COLLECTOR
3.EMITTER

## FEATURES

- High Breakdown Voltage
- Complementary to 2SB688

## APPLICATIONS

- Power Amplifier Applications

## MAXIMUM RATINGS ($T_a$=25℃ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 120 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 120 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current | 8 | A |
| $P_C$ | Collector Power Dissipation | 3 | W |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 42 | ℃/W |
| $T_J$,$T_{stg}$ | Operation Junction and Storage Temperature Range | -55~+150 | ℃ |

## ELECTRICAL CHARACTERISTICS ($T_a$=25℃ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C$=100μA,$I_E$=0 | 120 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$=50mA,$I_B$=0 | 120 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E$=100μA,$I_C$=0 | 5 | | | V |
| Collector cut-off current | $I_{CBO}$ | $V_{CB}$=120V,$I_E$=0 | | | 10 | μA |
| Emitter cut-off current | $I_{EBO}$ | $V_{EB}$=5V,$I_C$=0 | | | 10 | μA |
| DC current gain | $h_{FE}$* | $V_{CE}$=5V, $I_C$=1A | 55 | | 160 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$* | $I_C$=5A,$I_B$=500mA | | | 2.5 | V |
| Base-emitter voltage | $V_{BE}$* | $V_{CE}$=5V, $I_C$=5A | | | 1.5 | V |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$=10V,$I_E$=0, f=1MHz | | 280 | | pF |
| Transition frequency | $f_T$ | $V_{CE}$=5V,$I_C$=1A, f=1MHz | | 10 | | MHz |

*Pulse test

## CLASSIFICATION OF $h_{FE}$

| RANK | R | O |
|---|---|---|
| RANGE | 55-110 | 80-160 |