

台源国际股份有限公司

DAYA INTERNATIONAL CO., LTD

TO-92 Plastic-Encapsulate Transistors

S9011

S9011 TRANSISTOR (NPN)

FEATURE

Power dissipation

P_{CM} : 0.31 W ($T_{amb}=25^{\circ}C$)

Collector current

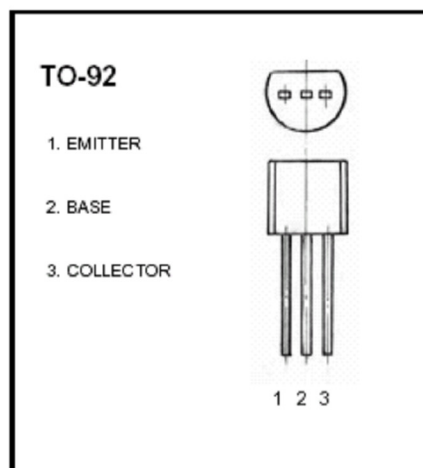
I_{CM} : 0.03 A

Collector-base voltage

$V_{(BR)CBO}$: 30 V

Operating and storage junction temperature range

T_j, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$



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

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|-------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=0.1mA, I_B=0$ | 20 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$ | 4 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=16V, I_E=0$ | | | 0.1 | μA |
| Collector cut-off current | I_{CBO} | $V_{CB}=16V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=3.5V, I_C=0$ | | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=5V, I_C=1mA$ | 28 | | 270 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=10mA, I_B=1mA$ | | | 0.3 | V |
| Base-emitter voltage | $V_{BE(sat)}$ | $I_C=10mA, I_B=1mA$ | | | 1 | V |
| Transition frequency | f_T | $V_{CE}=5V, I_C=1mA, f=30MHz$ | 150 | | | MHz |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | D | E | F | G | H | I | J |
|-------|-------|-------|-------|--------|--------|---------|---------|
| Range | 28-45 | 39-60 | 54-80 | 72-108 | 97-146 | 132-198 | 180-270 |