

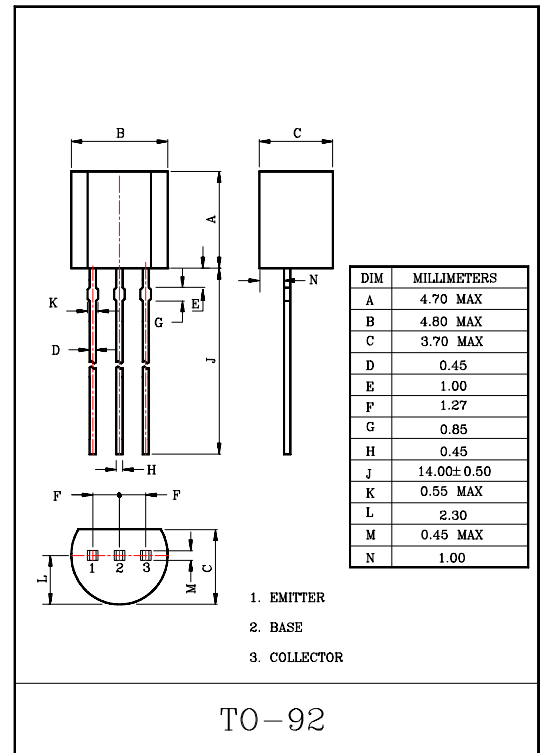
GENERAL PURPOSE APPLICATION.
HIGH VOLTAGE APPLICATION.

FEATURES

- High Collector Breakdwon Voltage
: $V_{CBO}=160V$, $V_{CEO}=140V$
- Low Leakage Current.
: $I_{CBO}=100nA(Max.)$, $V_{CB}=100V$
- Low Saturation Voltage
: $V_{CE(sat)}=0.25V(Max.)$, $I_C=50mA$, $I_B=5mA$
- Low Noise : $NF=10dB (Max.)$

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|-------------|
| Collector-Base Voltage | V_{CBO} | 160 | V |
| Collector-Emitter Voltage | V_{CEO} | 140 | V |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 600 | mA |
| Base Current | I_B | 100 | mA |
| Collector Power Dissipation | P_C | 625 | mW |
| Junction Temperature | T_j | 150 | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^{\circ}C$ |



2N5550

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--|-----------------------|---|------|------|------|------|
| Collector Cut-off Current | I _{CBO} | V _{CB} =100V, I _E =0 | - | - | 100 | nA |
| | | V _{CB} =100V, I _E =0, Ta=100°C | - | - | 100 | μA |
| Emitter Cut-off Current | I _{EBO} | V _{EB} =4V, I _C =0 | - | - | 50 | nA |
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | I _C =0.1mA, I _E =0 | 160 | - | - | V |
| Collector-Emitter Breakdown Voltage * | V _{(BR)CEO} | I _C =1mA, I _B =0 | 140 | - | - | V |
| Emitter-Base Breakdown Voltage | V _{(BR)EBO} | I _E =10μA, I _C =0 | 6 | - | - | V |
| DC Current Gain * | h _{FE} (1) | V _{CE} =5V, I _C =1mA | 60 | - | - | |
| | h _{FE} (2) | V _{CE} =5V, I _C =10mA | 60 | - | 250 | |
| | h _{FE} (3) | V _{CE} =5V, I _C =50mA | 20 | - | - | |
| Collector-Emitter Saturation Voltage * | V _{CE(sat)1} | I _C =10mA, I _B =1mA | - | - | 0.15 | V |
| | V _{CE(sat)2} | I _C =50mA, I _B =5mA | - | - | 0.25 | |
| Base-Emitter Saturation Voltage * | V _{BE(sat)1} | I _C =10mA, I _B =1mA | - | - | 1.0 | V |
| | V _{BE(sat)2} | I _C =50mA, I _B =5mA | - | - | 1.2 | |
| Transition Frequency | f _T | V _{CE} =10V, I _C =10mA, f=100MHz | 100 | - | 300 | MHz |
| Collector Output Capacitance | C _{ob} | V _{CB} =10V, I _E =0, f=1MHz | - | - | 6 | pF |
| Input Capacitance | C _{ib} | V _{BE} =0.5V, I _C =0, f=1MHz | - | - | 30 | pF |
| Small-Signal Current Gain | h _{fe} | V _{CE} =10V, I _C =1mA, f=1kHz | 50 | - | 200 | |
| Noise Figure | NF | V _{CE} =5V, I _C =250μA R _g =1kΩ, f=10Hz~15.7kHz | - | - | 10 | dB |

*Pulse Test : Pulse Width ≤300μS, Duty Cycle ≤2%