

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5550
2N5551

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5550 Series types are Molded Epoxy Silicon NPN Transistors designed for high voltage amplifier applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

| | SYMBOL | 2N5550 | 2N5551 | UNIT |
|--|-----------------------------------|-------------|--------|-------|
| Collector-Base Voltage | V _{CB0} | 160 | 180 | V |
| Collector-Emitter Voltage | V _{CEO} | 140 | 160 | V |
| Emitter-Base Voltage | V _{EBO} | | 6.0 | V |
| Collector Current | I _C | 600 | | mA |
| Power Dissipation | P _D | 625 | | mW |
| Power Dissipation (T _C =25°C) | P _D | 1.0 | | W |
| Operating and Storage Temp. | T _J , T _{stg} | -65 TO +150 | | °C |
| Thermal Resistance | θ _{JA} | 0.2 | | °C/mW |
| Thermal Resistance | θ _{JC} | 125 | | °C/W |

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | 2N5550 | | 2N5551 | | UNIT |
|----------------------|---|--------|------|--------|------|------|
| | | MIN | MAX | MIN | MAX | |
| I _{CB0} | V _{CB} =100V | | 100 | - | | nA |
| I _{CB0} | V _{CB} =120V | | - | 50 | | nA |
| I _{CB0} | V _{CB} =100V, T _A =100°C | | 100 | - | | μA |
| I _{CB0} | V _{CB} =120V, T _A =100°C | | - | 50 | | μA |
| I _{EBO} | V _{EB} =4.0V | | 50 | 50 | | nA |
| BV _{CB0} | I _C =100μA | 160 | | 180 | | V |
| BV _{CEO} | I _C =1.0mA | 140 | | 160 | | V |
| BV _{EBO} | I _E =10μA | 6.0 | | 6.0 | | V |
| V _{CE(SAT)} | I _C =10mA, I _B =1.0mA | | 0.15 | | 0.15 | V |
| V _{CE(SAT)} | I _C =50mA, I _B =5.0mA | | 0.25 | | 0.20 | V |
| V _{BE(SAT)} | I _C =10mA, I _B =1.0mA | | 1.0 | | 1.0 | V |
| V _{BE(SAT)} | I _C =50mA, I _B =5.0mA | | 1.2 | | 1.0 | V |
| h _{FE} | V _{CE} =5.0V, I _C =1.0mA | 60 | | 80 | | |
| h _{FE} | V _{CE} =5.0V, I _C =10mA | 60 | 250 | 80 | 250 | |
| h _{FE} | V _{CE} =5.0V, I _C =50mA | 20 | | 30 | | |
| h _{fe} | V _{CE} =10V, I _C =1.0mA, f=1.0kHz | 50 | 200 | 50 | 200 | |
| f _T | V _{CE} =10V, I _C =10mA, f=100MHz | 100 | 300 | 100 | 300 | MHz |
| C _{ob} | V _{CB} =10V, I _E =0, f=1.0MHz | | 6.0 | | 6.0 | pF |
| C _{ib} | V _{BE} =0.5V, I _C =0, f=1.0MHz | | 30 | | 20 | pF |
| NF | V _{CE} =5.0V, I _C =250μA, R _S =1.0Ω, f=10Hz TO 15.7kHz | | 10 | | 8.0 | dB |