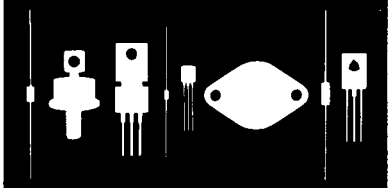
Central
Semiconductor Corp.
145 Adams Avenue
Hauppauge, New York 11788



# 2N2152 THRU 2N2154
# 2N2156 THRU 2N2158

GERMANIUM PNP POWER TRANSISTOR
170 WATTS

JEDEC TO-36 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N2152, 2N2156 Series types are Germanium Alloy PNP Power Transistors designed for high power, high gain industrial applications.

## MAXIMUM RATINGS ($T_C$=25°C)

| | SYMBOL | 2N2152 2N2156 | 2N2153 2N2157 | 2N2154 2N2158 | UNIT |
|---|---|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 45 | 60 | 75 | V |
| Collector-Emitter Voltage | $V_{CES}$ | 45 | 60 | 75 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 30 | 45 | 60 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 25 | 30 | 40 | V |
| Collector Current | $I_C$ | 30 | 30 | 30 | A |
| Power Dissipation | $P_D$ | 170 | 170 | 170 | W |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | | -65 TO +110 | | °C |
| Thermal Resistance, Junction To Case | $\Theta_{JC}$ | 0.5 | 0.5 | 0.5 | °C/W |

## ELECTRICAL CHARACTERISTICS ($T_C$=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | 2N2152 2N2156 MIN | 2N2152 2N2156 MAX | 2N2153 2N2157 MIN | 2N2153 2N2157 MAX | 2N2154 2N2158 MIN | 2N2154 2N2158 MAX | UNIT |
|---|---|---|---|---|---|---|---|---|
| $I_{CBO}$ | $V_{CB}$=2.0V | | 0.2 | | 0.2 | | 0.2 | mA |
| $I_{CBO}$ | $V_{CB}$=Rated $V_{CBO}$ | | 4.0 | | 4.0 | | 4.0 | mA |
| $I_{CBO}$ | $V_{CB}$=Rated $V_{CBO}$, $T_C$=71°C | | 15 | | 15 | | 15 | mA |
| $I_{EBO}$ | $V_{EB}$=Rated $V_{EBO}$ | | 4.0 | | 4.0 | | 4.0 | mA |
| $I_{EBO}$ | $V_{EB}$=Rated $V_{EBO}$, $T_C$=71°C | | 15 | | 15 | | 15 | mA |
| $BV_{CES}$ | $I_C$=300mA | 45 | | 60 | | 75 | | V |
| $BV_{CEO}$ | $I_C$=1.0A | 30 | | 45 | | 60 | | V |
| $V_{EBF}$ | $V_{CB}$=Rated $V_{CBO}$ | | 1.0 | | 1.0 | | 1.0 | V |
| $V_{CE(SAT)}$ | $I_C$=5.0A, $I_B$=500mA | | 0.1 | | 0.1 | | 0.1 | V |
| $V_{CE(SAT)}$ | $I_C$=25A, $I_B$=2.0A | | 0.3 | | 0.3 | | 0.3 | V |
| $V_{BE(SAT)}$ | $I_C$=5.0A, $I_B$=500mA | | 1.0 | | 1.0 | | 1.0 | V |
| $V_{BE(SAT)}$ | $I_C$=25A, $I_B$=2.0A | | 2.0 | | 2.0 | | 2.0 | V |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=5.0A (2N2152, 2N2153, 2N2154 ONLY) | 50 | 100 | 50 | 100 | 50 | 100 | |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=5.0A (2N2156, 2N2157, 2N2158 ONLY) | 80 | 160 | 80 | 160 | 80 | 160 | |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=15A (2N2152, 2N2153, 2N2154 ONLY) | 25 | - | 25 | - | 25 | - | |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=15A (2N2156, 2N2157, 2N2158 ONLY) | 40 | - | 40 | - | 40 | - | |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=25A (ALL TYPES) | 15 | - | 15 | - | 15 | - | |
| $f_{\alpha e}$ | $V_{CE}$=6.0V, $I_C$=5.0A | 2.0 | - | 2.0 | - | 2.0 | - | kHz |

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Downloaded from Elcodis.com electronic components distributor