

CentralTM Semiconductor Corp.

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

Manufacturers of World Class Discrete Semiconductors

2N4404
2N4405

PNP SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4404, 2N4405 types are PNP Silicon Epitaxial Planar Transistors designed for general purpose and switching applications.

MAXIMUM RATINGS (T_C = 25°C)

| | SYMBOL | | UNITS |
|---|-----------------------------------|-------------|-------|
| Collector-Base Voltage | V _{CB0} | 80 | V |
| Collector-Emitter Voltage | V _{CEO} | 80 | V |
| Emitter-Base Voltage | V _{EBO} | 5.0 | V |
| Collector Current | I _C | 1.0 | A |
| Power Dissipation (T _A = 25°C) | P _D | 1.25 | W |
| Power Dissipation | P _D | 8.75 | W |
| Operating and Storage | | | |
| Junction Temperature | T _J , T _{stg} | -65 to +200 | °C |
| Thermal Resistance | θ _{JA} | 140 | °C/W |
| Thermal Resistance | θ _{JC} | 25 | °C/W |

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

| SYMBOL | TEST CONDITIONS | 2N4404 | | 2N4405 | | UNITS |
|----------------------|--|--------|------|--------|------|-------|
| | | MIN | MAX | MIN | MAX | |
| I _{CBO} | V _{CB} = 60V | | 25 | | 25 | nA |
| I _{EBO} | V _{EB} = 3.0V | | 25 | | 25 | nA |
| BV _{CEO} | I _C = 10mA | 80 | | 80 | | V |
| BV _{CBO} | I _C = 10μA | 80 | | 80 | | V |
| BV _{EBO} | I _E = 10μA | 5.0 | | 5.0 | | V |
| V _{CE(SAT)} | I _C = 10mA, I _B = 1.0mA | | 0.15 | | 0.15 | V |
| V _{CE(SAT)} | I _C = 150mA, I _B = 15mA | | 0.2 | | 0.2 | V |
| V _{CE(SAT)} | I _C = 500mA, I _B = 50mA | | 0.5 | | 0.5 | V |
| V _{BE(SAT)} | I _C = 10mA, I _B = 1.0mA | | 0.8 | | 0.8 | V |
| V _{BE(SAT)} | I _C = 500mA, I _B = 50mA | 0.85 | 1.2 | 0.85 | 1.2 | V |
| V _{BE(ON)} | V _{CE} = 1.0V, I _C = 150mA | | 0.9 | | 0.9 | V |
| h _{FE} | V _{CE} = 5.0V, I _C = 0.1mA | | 30 | | 75 | |
| h _{FE} | V _{CE} = 5.0V, I _C = 10mA | | 40 | | 100 | |
| h _{FE} | V _{CE} = 5.0V, I _C = 150mA | | 40 | 120 | 300 | |
| h _{FE} | V _{CE} = 5.0V, I _C = 500mA | | 30 | | 50 | |

ELECTRICAL CHARACTERISTICS (Continued)

| <u>SYMBOL</u> | <u>TEST CONDITIONS</u> | <u>MIN</u> | <u>MAX</u> | <u>UNITS</u> |
|---------------|--|------------|------------|--------------|
| f_T | $V_{CE} = 20V, I_C = 50mA, f = 100MHz$ | 150 | 600 | MHz |
| C_{cb} | $V_{CB} = 10V, I_E = 0, f = 1.0MHz$ | | 20 | pF |
| C_{eb} | $V_{BE} = 0.5V, I_C = 0, f = 1.0MHz$ | | 110 | pF |
| t_d | $V_{CC} = 30V, V_{BE(off)} = 2.0V, I_C = 500mA, I_{B1} = 50mA$ | | 40 | ns |
| t_r | $V_{CC} = 30V, V_{BE(off)} = 2.0V, I_C = 500mA, I_{B1} = 50mA$ | | 60 | ns |
| t_s | $V_{CC} = 30V, I_C = 500mA, I_{B1} = I_{B2} = 50mA$ | | 350 | ns |
| t_f | $V_{CC} = 30V, I_C = 500mA, I_{B1} = I_{B2} = 50mA$ | | 50 | ns |

Central[™] **Semiconductor Corp.**

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

Copyright © Each Manufacturing Company.

All Datasheets cannot be modified without permission.

This datasheet has been download from :

www.AllDataSheet.com

100% Free DataSheet Search Site.

Free Download.

No Register.

Fast Search System.

www.AllDataSheet.com