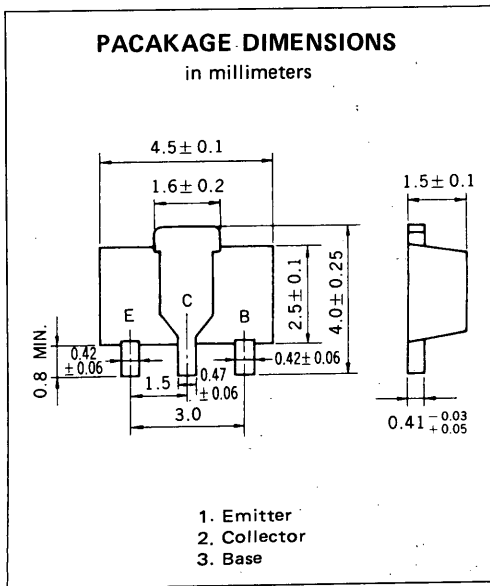


NPN SILICON EPITAXIAL TRANSISTOR  
POWER MINI MOLD

DESCRIPTION

2SC3554 is designed for high Voltage Switching application, especially in Hybrid Integrated Circuits.



FEATURES

- World Standard Miniature Package
- High Voltage :  $V_{CE0} = 300\text{ V}$

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ( $T_a = 25^\circ\text{C}$ )

|                              |           |     |    |
|------------------------------|-----------|-----|----|
| Collector to Base Voltage    | $V_{CB0}$ | 300 | V  |
| Collector to Emitter Voltage | $V_{CE0}$ | 300 | V  |
| Emitter to Base Voltage      | $V_{EB0}$ | 5   | V  |
| Collector Current (DC)       | $I_C$     | 200 | mA |

Maximum Power Dissipation

|  |       |     |   |
|--|-------|-----|---|
| Total Power Dissipation at $25^\circ\text{C}$ Ambient Temperature* | $P_T$ | 2.0 | W |
|--|-------|-----|---|

Maximum Temperatures

|                           |           |             |                  |
|---------------------------|-----------|-------------|------------------|
| Junction Temperature      | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

\*When mounted on ceramic substrate of  $16\text{ cm}^2 \times 0.7\text{ mm}$

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

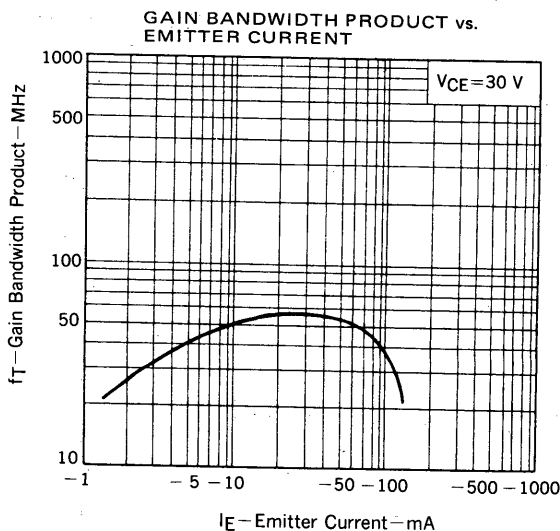
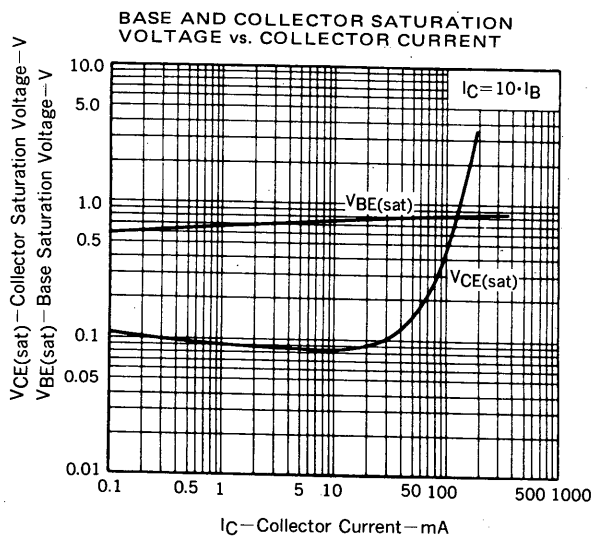
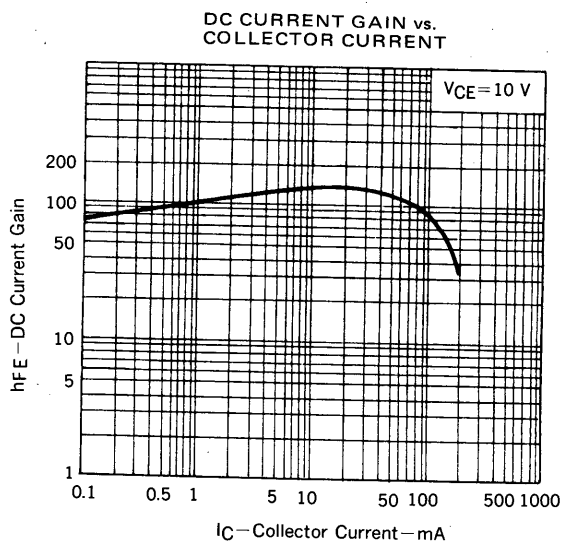
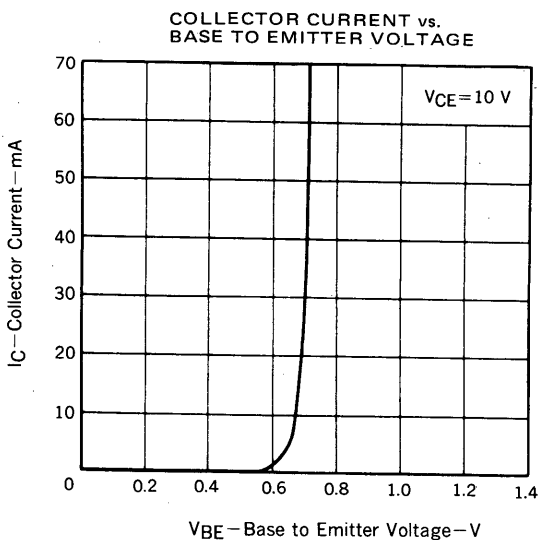
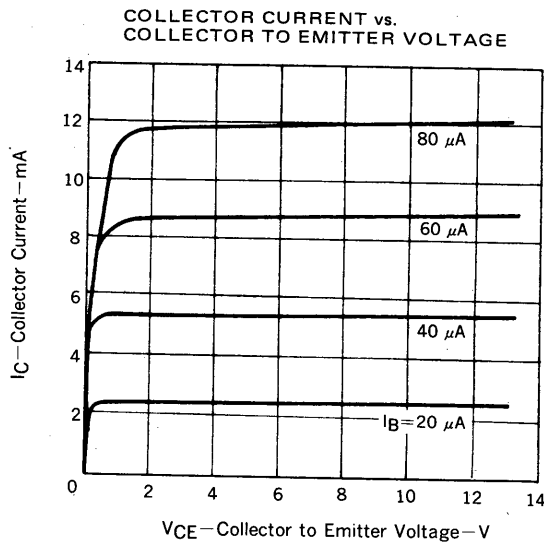
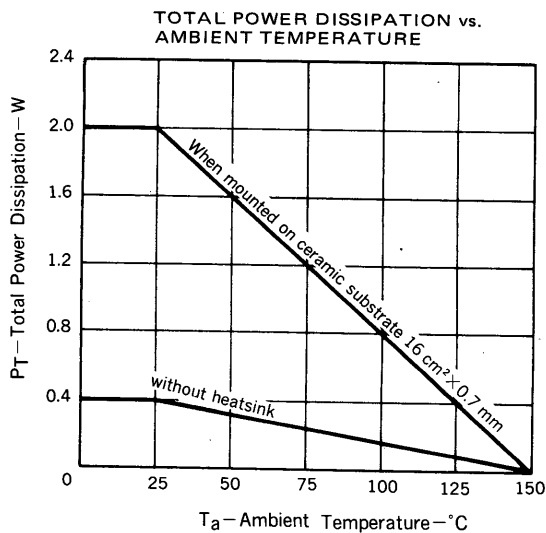
| CHARACTERISTIC               | SYMBOL             | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS                                     |
|------------------------------|--------------------|------|------|------|------|---|
| Collector Cutoff Current     | $I_{CBO}$          |      |      | 100  | nA   | $V_{CB} = 200\text{ V}, I_E = 0$                    |
| Emitter Cutoff Current       | $I_{EBO}$          |      |      | 100  | nA   | $V_{EB} = 5.0\text{ V}, I_C = 0$                    |
| DC Current Gain              | $h_{FE}^{**}$      | 60   | 150  | 250  |      | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$          |
| Collector Saturation Voltage | $V_{CE(sat)}^{**}$ |      | 0.15 | 1.5  | V    | $I_C = 50\text{ mA}, I_B = 5.0\text{ mA}$           |
| Gain Bandwidth Product       | $f_T$              |      | 50   |      | MHz  | $V_{CE} = 30\text{ V}, I_E = -10\text{ mA}$         |
| Output Capacitance           | $C_{ob}$           |      | 2.8  | 3.5  | pF   | $V_{CB} = 30\text{ V}, I_E = 0, f = 1.0\text{ MHz}$ |

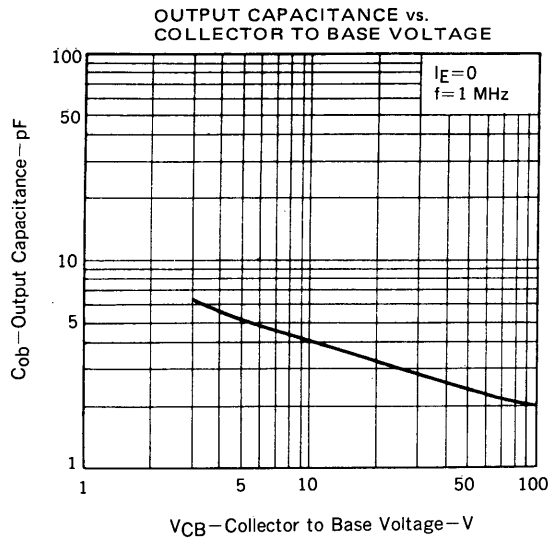
\*\*Pulsed:  $PW \leq 350\ \mu\text{s}$ , Duty Cycle  $\leq 2\%$

$h_{FE}$  Classification

| MARKING  | SM        | SL         | SK         |
|----------|-----------|------------|------------|
| $h_{FE}$ | 60 to 120 | 100 to 200 | 160 to 250 |

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )





REFERENCE

| Document Name  | Document No. |
|--|--------------|
| NEC semiconductor device reliability/quality control system. | TEI-1202     |
| Quality grade on NEC semiconductor devices.                  | IEI-1209     |
| Semiconductor device mounting technology manual.             | IEI-1207     |
| Semiconductor device package manual.                         | IEI-1213     |
| Guide to quality assurance for semiconductor devices.        | MEI-1202     |
| Semiconductor selection guide.                               | MF-1134      |

[MEMO]

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of NEC Corporation. NEC Corporation assumes no responsibility for any errors which may appear in this document.

NEC Corporation does not assume any liability for infringement of patents, copyrights or other intellectual property rights of third parties by or arising from use of a device described herein or any other liability arising from use of such device. No license, either express, implied or otherwise, is granted under any patents, copyrights or other intellectual property rights of NEC Corporation or others.

The devices listed in this document are not suitable for use in aerospace equipment, submarine cables, nuclear reactor control systems and life support systems. If customers intend to use NEC devices for above applications or they intend to use "Standard" quality grade NEC devices for applications not intended by NEC, please contact our sales people in advance.

Application examples recommended by NEC Corporation

Standard: Computer, Office equipment, Communication equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment, Other consumer products, etc.

Special: Automotive and Transportation equipment, Traffic control systems, Antidisaster systems, Anticrime systems, etc.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

[LittleDiode.com](http://LittleDiode.com)

Looking forward to providing you with the best possible service.