

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

NPN SILICON TRANSISTORS

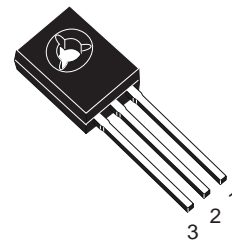
| Type | Marking |
|----------|----------|
| BD135 | BD135 |
| BD135-10 | BD135-10 |
| BD135-16 | BD135-16 |
| BD139 | BD139 |
| BD139-10 | BD139-10 |
| BD139-16 | BD139-16 |

- STMicroelectronics PREFERRED SALESTYPES

DESCRIPTION

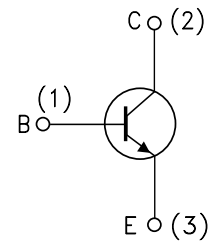
The BD135 and BD139 are silicon Epitaxial Planar NPN transistors mounted in Jedec SOT-32 plastic package, designed for audio amplifiers and drivers utilizing complementary or quasi-complementary circuits.

The complementary PNP types are BD136 and BD140 respectively.



SOT-32

INTERNAL SCHEMATIC DIAGRAM



SC06960

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | | Unit |
|-----------|--|------------|-------|------------------|
| | | BD135 | BD139 | |
| V_{CBO} | Collector-Base Voltage ($I_E = 0$) | 45 | 80 | V |
| V_{CEO} | Collector-Emitter Voltage ($I_B = 0$) | 45 | 80 | V |
| V_{EBO} | Emitter-Base Voltage ($I_C = 0$) | 5 | | V |
| I_C | Collector Current | 1.5 | | A |
| I_{CM} | Collector Peak Current | 3 | | A |
| I_B | Base Current | 0.5 | | A |
| P_{tot} | Total Dissipation at $T_c \leq 25\text{ }^\circ\text{C}$ | 12.5 | | W |
| P_{tot} | Total Dissipation at $T_{amb} \leq 25\text{ }^\circ\text{C}$ | 1.25 | | W |
| T_{stg} | Storage Temperature | -65 to 150 | | $^\circ\text{C}$ |
| T_j | Max. Operating Junction Temperature | 150 | | $^\circ\text{C}$ |

BD135 / BD139

THERMAL DATA

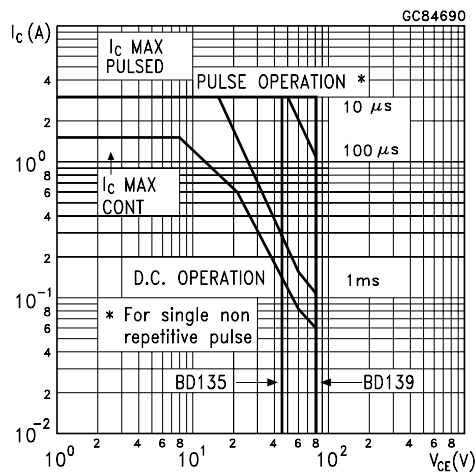
| | | | | |
|-----------------------|----------------------------------|-----|----|------|
| R _{thj-case} | Thermal Resistance Junction-case | Max | 10 | °C/W |
|-----------------------|----------------------------------|-----|----|------|

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|------------------------|---|--|----------------|------|------------|----------|
| I _{CBO} | Collector Cut-off Current (I _E = 0) | V _{CB} = 30 V V _{CB} = 30 V T _C = 125 °C | | | 0.1 10 | μA μA |
| I _{EBO} | Emitter Cut-off Current (I _C = 0) | V _{EB} = 5 V | | | 10 | μA |
| V _{CEO(sus)*} | Collector-Emitter Sustaining Voltage (I _B = 0) | I _C = 30 mA for BD135 for BD139 | 45 80 | | | V V |
| V _{CE(sat)*} | Collector-Emitter Saturation Voltage | I _C = 0.5 A I _B = 0.05 A | | | 0.5 | V |
| V _{BE*} | Base-Emitter Voltage | I _C = 0.5 A V _{CE} = 2 V | | | 1 | V |
| h _{FE*} | DC Current Gain | I _C = 5 mA V _{CE} = 2 V I _C = 150 mA V _{CE} = 2 V I _C = 0.5 A V _{CE} = 2 V | 25 40 25 | | 250 | |
| h _{FE} | h _{FE} Groups | I _C = 150 mA V _{CE} = 2 V for BD135/BD139 group-10 for BD135/BD139 group-16 | 63 100 | | 160 250 | |

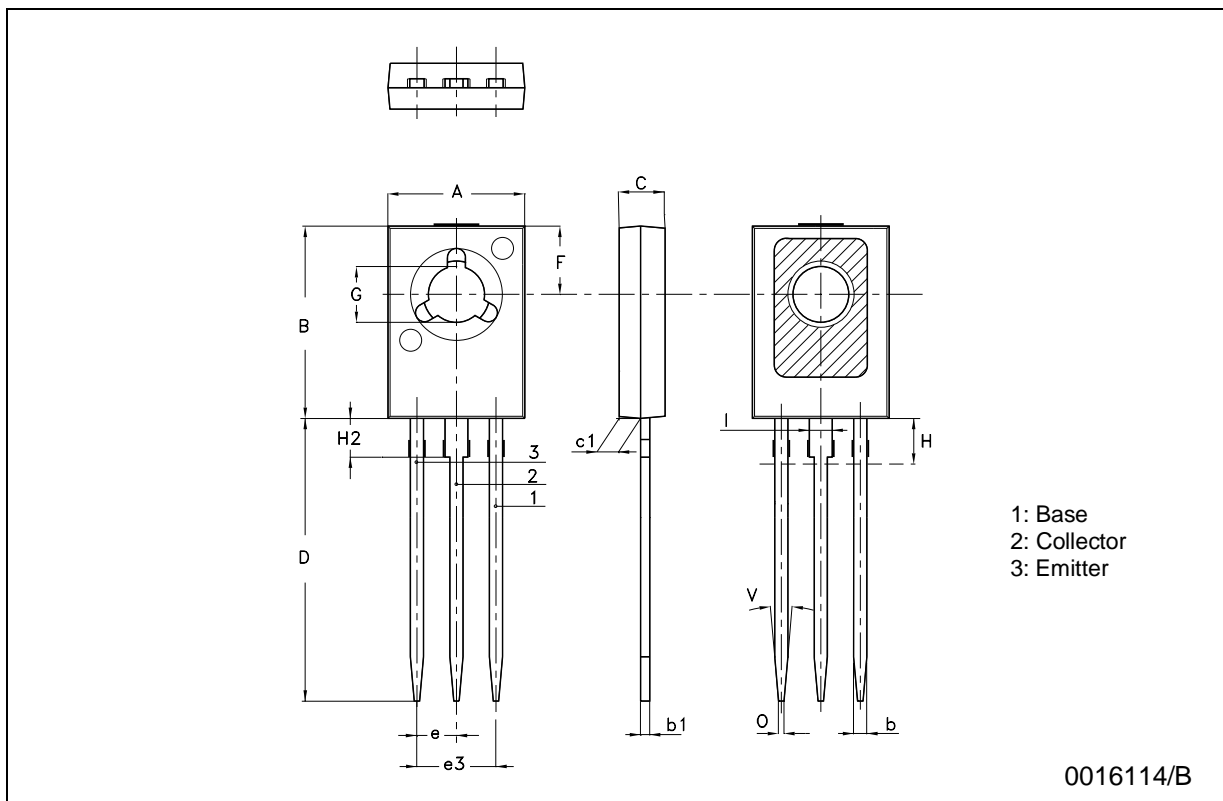
* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

Safe Operating Area



SOT-32 (TO-126) MECHANICAL DATA

| DIM. | mm | | | inch | | |
|------|------|------|------|-------|-------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | 7.4 | | 7.8 | 0.291 | | 0.307 |
| B | 10.5 | | 10.8 | 0.413 | | 0.425 |
| b | 0.7 | | 0.9 | 0.028 | | 0.035 |
| b1 | 0.40 | | 0.65 | 0.015 | | 0.025 |
| C | 2.4 | | 2.7 | 0.094 | | 0.106 |
| c1 | 1.0 | | 1.3 | 0.039 | | 0.051 |
| D | 15.4 | | 16.0 | 0.606 | | 0.630 |
| e | | 2.2 | | | 0.087 | |
| e3 | | 4.4 | | | 0.173 | |
| F | | 3.8 | | | 0.150 | |
| G | 3 | | 3.2 | 0.118 | | 0.126 |
| H | | | 2.54 | | | 0.100 |
| H2 | | 2.15 | | | 0.084 | |
| I | | 1.27 | | | 0.05 | |
| O | | 0.3 | | | 0.011 | |
| V | | 10° | | | 10° | |



Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a trademark of STMicroelectronics

© 2001 STMicroelectronics – Printed in Italy – All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States.

<http://www.st.com>