

BD675 SERIES
NPN SILICON
POWER DARLINGTON TRANSISTOR



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BD675 Series types are NPN Silicon Darlington Power Transistors, available in the plastic TO-126 package, and are designed for audio and video output applications.



MARKING: FULL PART NUMBER

| | SYMBOL | BD675 | BD677 | BD679 | BD681 | BD683 | UNITS |
|-----------------------------------------|-----------------------------------|--------|--------|-------------|-------|-------|-------|
| | | BD675A | BD677A | BD679A | | | |
| MAXIMUM RATINGS: (T _C =25°C) | | | | | | | |
| Collector-Base Voltage | V _{CB0} | 45 | 60 | 80 | 100 | 120 | V |
| Collector-Emitter Voltage | V _{CEO} | 45 | 60 | 80 | 100 | 120 | V |
| Emitter-Base Voltage | V _{EBO} | | | 5.0 | | | V |
| Continuous Collector Current | I _C | | | 4.0 | | | A |
| Continuous Base Current | I _B | | | 100 | | | mA |
| Power Dissipation | P _D | | | 40 | | | W |
| Operating and Storage | | | | | | | |
| Junction Temperature | T _J , T _{stg} | | | -65 to +150 | | | °C |
| Thermal Resistance | θ _{JC} | | | 3.13 | | | °C/W |

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

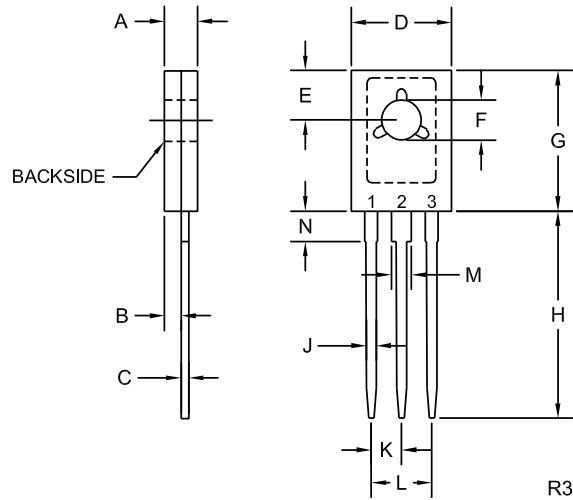
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------------------|-----------------------------------------------------------------|-----|-----|-------|
| I _{CBO} | V _{CB} =Rated V _{CB0} | | 200 | μA |
| I _{CBO} | V _{CB} =Rated V _{CB0} , T _C =100°C | | 2.0 | mA |
| I _{CEO} | V _{CE} =½Rated V _{CEO} | | 500 | μA |
| I _{EBO} | V _{EB} =5.0V | | 2.0 | mA |
| BV _{CEO} | I _C =50mA (BD675, BD675A) | 45 | | V |
| BV _{CEO} | I _C =50mA (BD677, BD677A) | 60 | | V |
| BV _{CEO} | I _C =50mA (BD679, BD679A) | 80 | | V |
| BV _{CEO} | I _C =50mA (BD681) | 100 | | V |
| BV _{CEO} | I _C =50mA (BD683) | 120 | | V |
| V _{CE(SAT)} | I _C =1.5A, I _B =30mA (Non-A) | | 2.5 | V |
| V _{CE(SAT)} | I _C =2.0A, I _B =40mA (A) | | 2.8 | V |
| V _{BE(ON)} | V _{CE} =3.0V, I _C =1.5A (Non-A) | | 2.5 | V |
| V _{BE(ON)} | V _{CE} =3.0V, I _C =2.0A (A) | | 2.5 | V |
| h _{FE} | V _{CE} =3.0V, I _C =1.5A (Non-A) | 750 | | |
| h _{FE} | V _{CE} =3.0V, I _C =2.0A (A) | 750 | | |
| h _{fe} | V _{CE} =3.0V, I _C =1.5A, f=1.0MHz | 1.0 | | |

R1 (14-June 2010)

BD675 SERIES
NPN SILICON
POWER DARLINGTON TRANSISTOR



TO-126 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING:

FULL PART NUMBER

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|-------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.094 | 0.110 | 2.40 | 2.80 |
| B | 0.050 | | 1.27 | |
| C | 0.015 | 0.030 | 0.38 | 0.75 |
| D | 0.291 | 0.335 | 7.40 | 8.50 |
| E | 0.148 | | 3.75 | |
| F | 0.118 | 0.134 | 3.00 | 3.40 |
| G | 0.413 | 0.472 | 10.50 | 12.00 |
| H | 0.618 | | 15.70 | |
| J | 0.024 | 0.035 | 0.62 | 0.90 |
| K | 0.089 | | 2.25 | |
| L | 0.177 | | 4.50 | |
| M | 0.045 | 0.055 | 1.14 | 1.40 |
| N | 0.083 | | 2.10 | |

TO-126 (REV:R3)

R1 (14-June 2010)