



Features

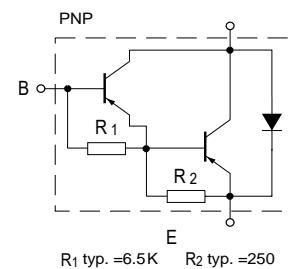
- Complement To BD679, BD681



TO-252-2L

Package Marking and Ordering Information

| Product ID | Pack | Packing Method | Qty(PCS) |
|-------------|-----------|----------------|----------|
| BD680/BD682 | TO-252-2L | Tape and Reel | 2500 |



Maximum Ratings (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Limit | Unit |
|------------------------------------|-----------|----------|------|
| Collector-Base Voltage BD680 | V_{CBO} | -80 | V |
| | | -100 | |
| Collector-Emitter Voltage BD680 | V_{CEO} | -80 | V |
| | | -100 | |
| Emitter-Base Voltage | V_{EBO} | -6 | V |
| Collector Current | I_C | -4 | A |
| Collector Power Dissipation | P_C | 2 | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55~+150 | °C |

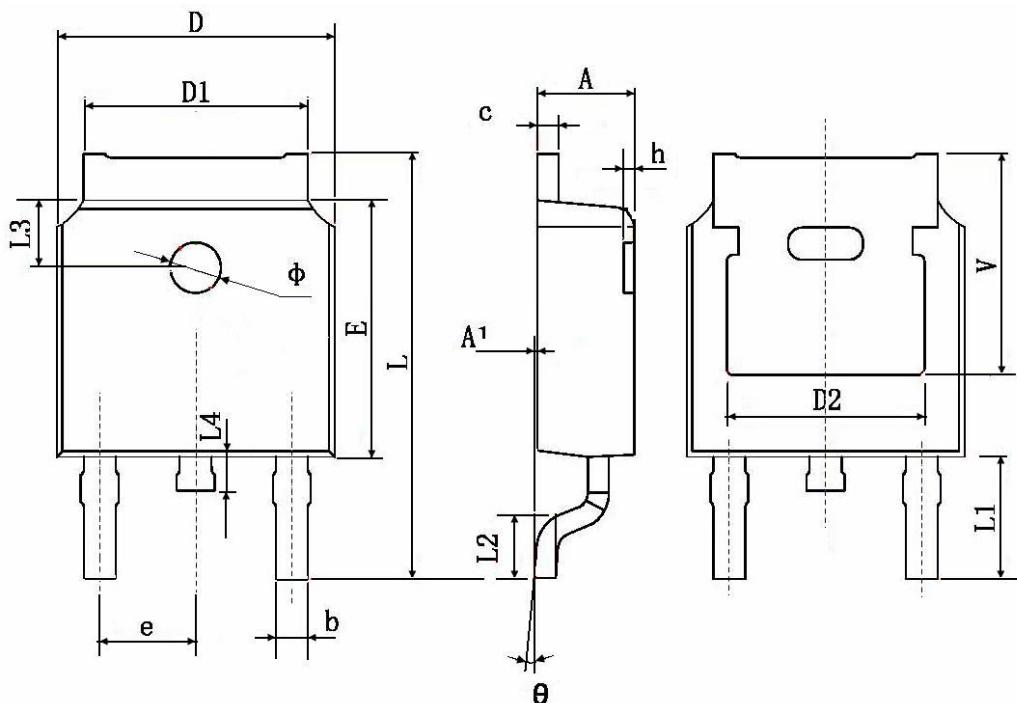


Electrical Characteristics(Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---------------|--|-------------|------|-------|------|
| Collector-base breakdown voltage BD680 BD682 | $V_{(BR)CBO}$ | $I_C = -0.1\text{mA}, I_E = 0$ | -80 -100 | | | V |
| Collector-emitter breakdown voltage BD680 BD682 | $V_{(BR)CEO}$ | $I_C = -10\text{mA}, I_B = 0$ | -80 -100 | | | V |
| Base-emitter breakdown voltage | $V_{(BR)EBO}$ | $I_E = -1\text{mA}, I_C = 0$ | 6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -100\text{V}, I_E = 0$ | | | -1 | uA |
| Collector cut-off current | I_{CEO} | $V_{CE} = -100\text{V}, I_B = 0$ | | | -1 | uA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -10\text{V}, I_C = 0$ | | -1.3 | -2.5 | mA |
| DC current gain | $h_{FE(3)}$ | $V_{CE} = -5\text{V}, I_C = 2\text{A}$ | 2000 | | 15000 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -3\text{A}, I_B = 12\text{mA}$ | | -1.2 | -1.8 | V |



TO-252-2L Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.200 | 2.400 | 0.087 | 0.094 |
| A1 | 0.000 | 0.127 | 0.000 | 0.005 |
| b | 0.660 | 0.860 | 0.026 | 0.034 |
| c | 0.460 | 0.580 | 0.018 | 0.023 |
| D | 6.500 | 6.700 | 0.256 | 0.264 |
| D1 | 5.100 | 5.460 | 0.201 | 0.215 |
| D2 | 0.483 TYP. | | 0.190 TYP. | |
| E | 6.000 | 6.200 | 0.236 | 0.244 |
| e | 2.186 | 2.386 | 0.086 | 0.094 |
| L | 9.800 | 10.400 | 0.386 | 0.409 |
| L1 | 2.900 TYP. | | 0.114 TYP. | |
| L2 | 1.400 | 1.700 | 0.055 | 0.067 |
| L3 | 1.600 TYP. | | 0.063 TYP. | |
| L4 | 0.600 | 1.000 | 0.024 | 0.039 |
| phi | 1.100 | 1.300 | 0.043 | 0.051 |
| theta | 0° | 8° | 0° | 8° |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| V | 5.350 TYP. | | 0.211 TYP. | |



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