



Features

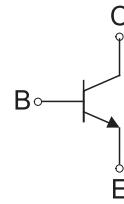
- Power Switching Applications

Package Marking and Ordering Information

| Product ID | Pack | Marking | Qty(PCS) |
|------------|-----------------|---------|----------|
| 3DD13003 | TO-252-2L(DPAK) | 13003 | 2500 |



**TO-252-2L
(DPAK)**



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

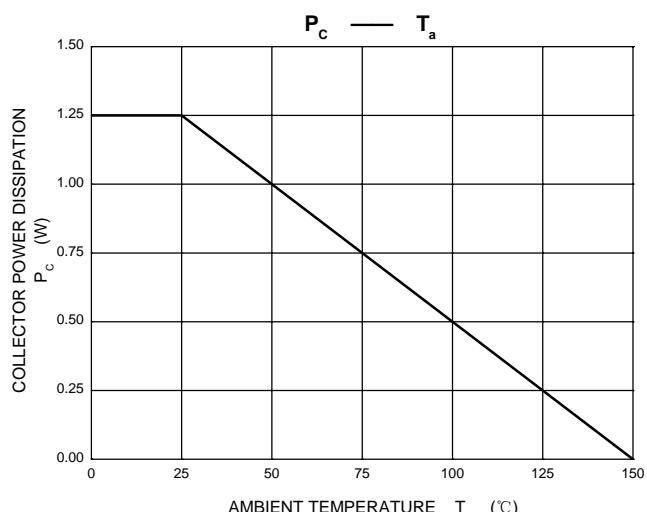
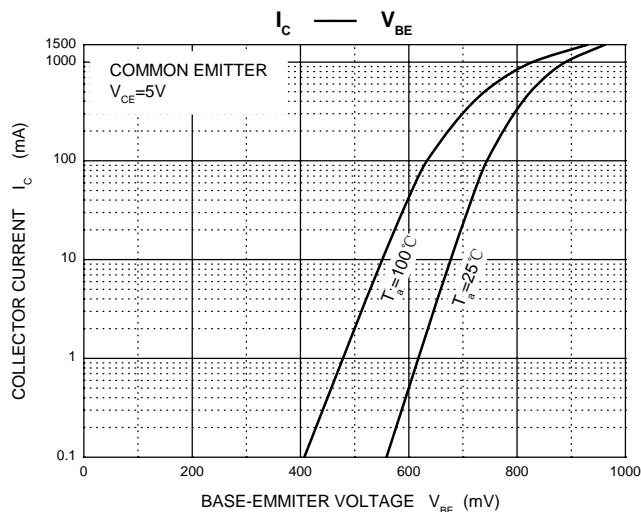
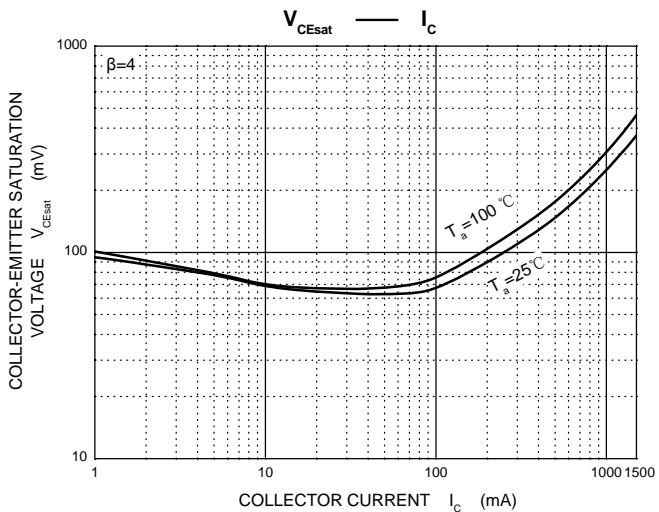
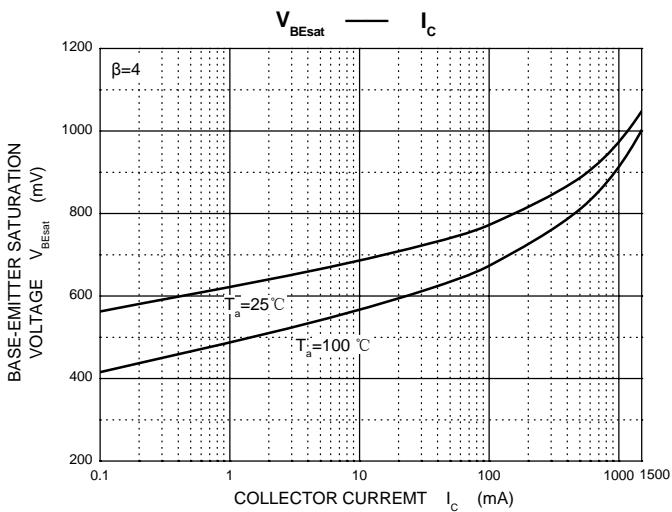
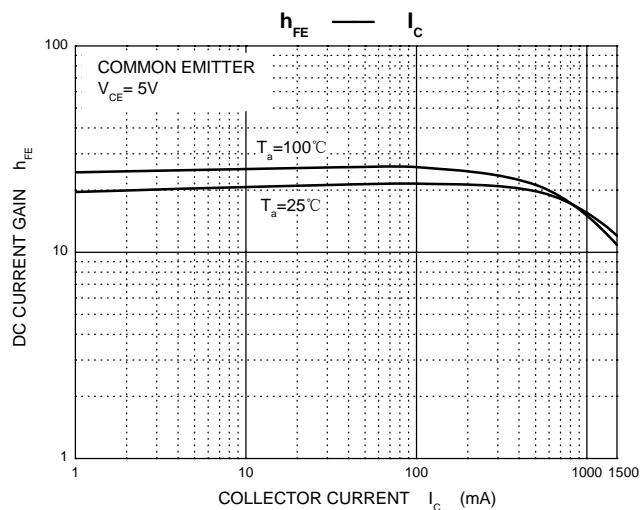
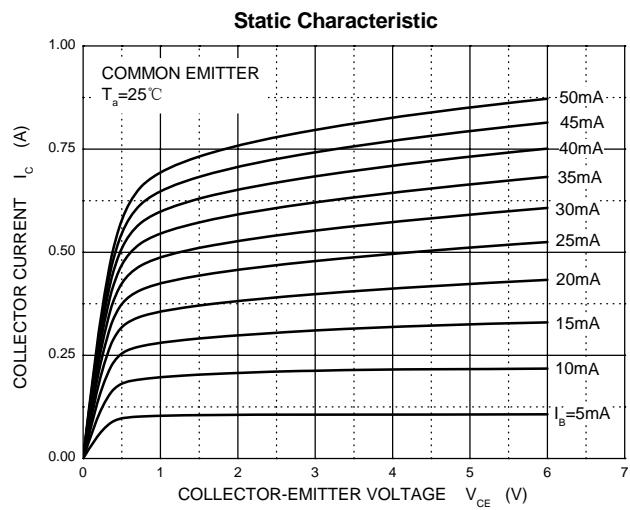
| Symbol | Parameter | Value | Unit |
|-----------------------------------|--|----------|------|
| V _{CBO} | Collector-Base Voltage | 700 | V |
| V _{CEO} | Collector-Emitter Voltage | 480 | V |
| V _{EBO} | Emitter-Base Voltage | 9 | V |
| I _C | Collector Current -Continuous | 1.5 | A |
| P _c | Collector Dissipation | 1.25 | W |
| T _J , T _{stg} | Operation Junction and Storage Temperature Range | -55~+150 | °C |

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

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|--|-----|-----|-----|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 1mA, I _E =0 | 700 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 10 mA, I _B =0 | 480 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E = 1mA, I _C =0 | 9 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} = 700V, I _E =0 | | | 0.5 | mA |
| Collector cut-off current | I _{CEO} | V _{CE} = 400V, I _B =0 | | | 0.5 | mA |
| Emitter cut-off current | I _{EBO} | V _{EB} = 7 V, I _C =0 | | | 0.5 | mA |
| DC current gain | h_{FE} (1) | V _{CE} = 5 V, I _C = 0.5 A | 20 | | 30 | |
| | h_{FE} (2) | V _{CE} = 5 V, I _C = 1.5A | 5 | | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =0.5A, I _B = 200 mA | | | 0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C =0.5A, I _B = 200mA | | | 1.2 | V |
| Base-emitter voltage | V _{BE} | I _E = 2A | | | 3 | V |
| Transition frequency | f _T | V _{CE} =10V, I _C =100mA f =1MHz | 5 | | | MHz |
| Fall time | t _f | I _C =1A, I _{B1} =-I _{B2} =0.2A V _{CC} =100V | | | 0.5 | μs |
| Storage time | t _s | I _C =250mA | 1.5 | | 3.5 | μs |

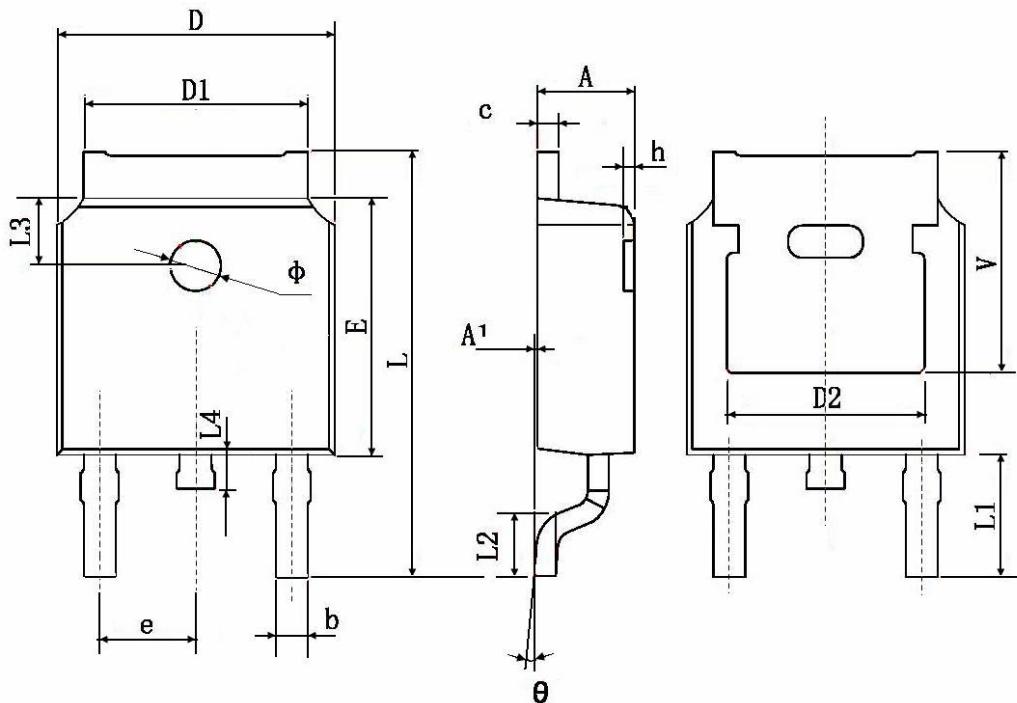


Typical Characteristics





TO-252-2L(DPAK) Package Information



| 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 |
| Φ | 1.100 | 1.300 | 0.043 | 0.051 |
| θ | 0° | 8° | 0° | 8° |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| V | 5.350 TYP. | | 0.211 TYP. | |



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