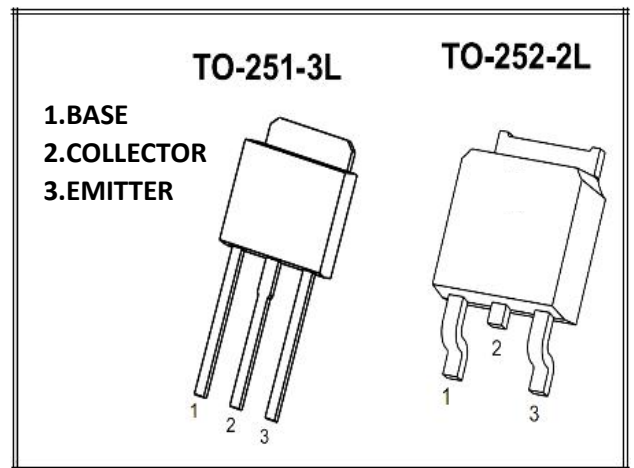
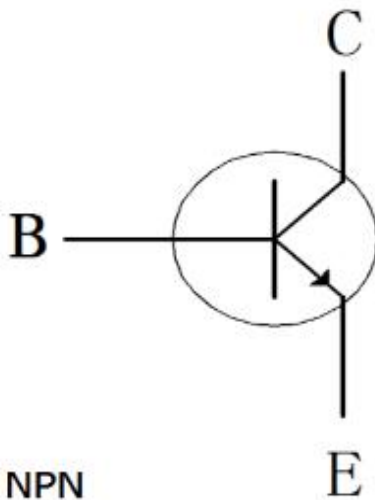


TRANSISTOR (NPN)

Equivalent Circuit:



FEATURES:

- power switching applications

MARKING:

D882 TSD XX

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|--------|----------|------|
| Collector-Base Voltage | VCBO | 40 | V |
| Collector-Emitter Voltage | VCEO | 30 | V |
| Emitter-Base Voltage | VEBO | 6 | V |
| Collector Current -Continuous | IC | 3 | A |
| Collector Current -Pulsed | ICM | 7 | A |
| Collector Power Dissipation | PC | 1.25 | W |
| Thermal Resistance From Junction To Ambient | ROJA | 125 | °C/W |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -55~+150 | °C |

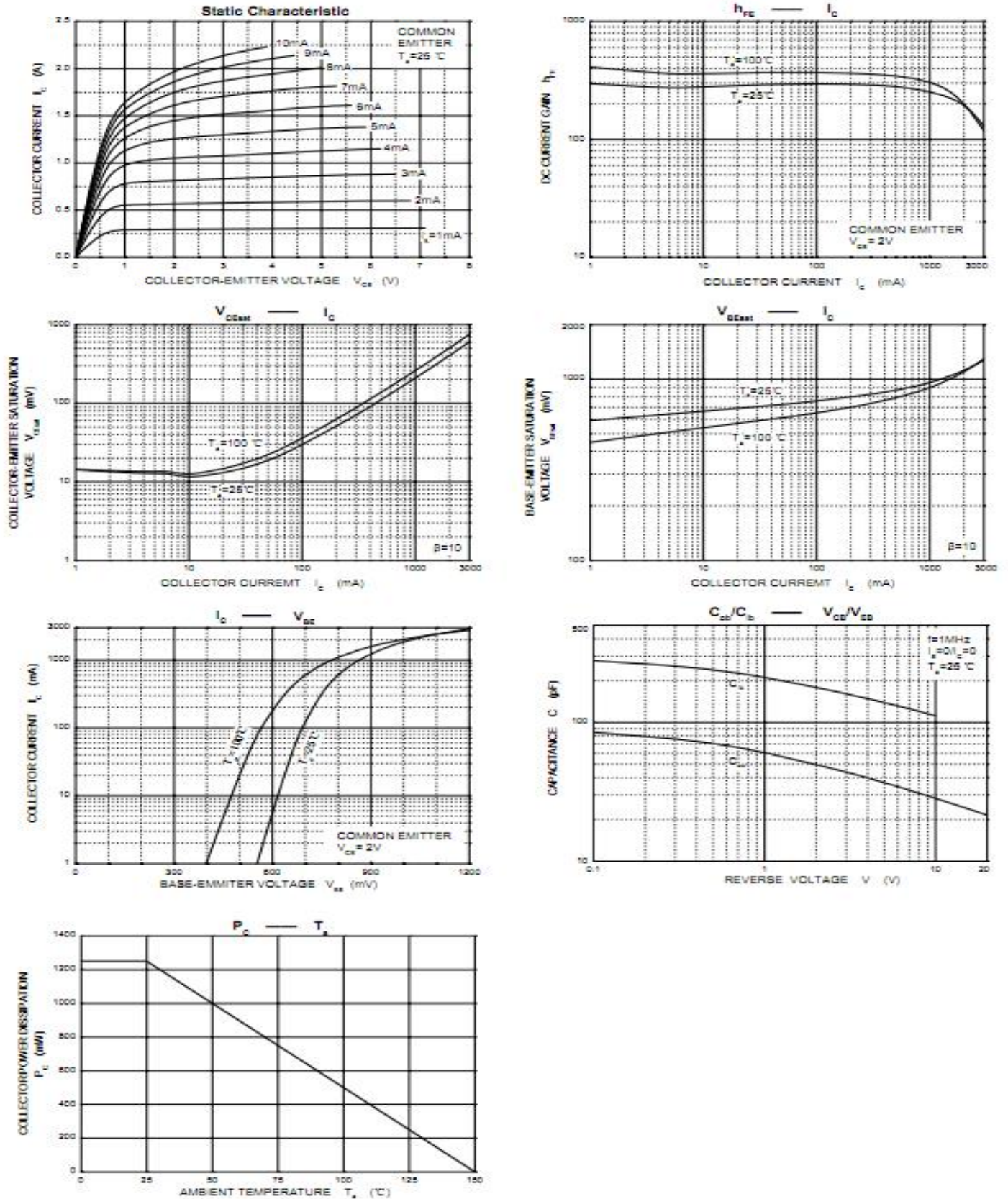
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specific)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|--------------------------------------|-----------------|--------------------------------------|-----|-----|-----|------|
| Collector-base breakdown voltage | V(BR)CBO | IC= 100μA, IE=0 | 40 | | | V |
| Collector-emitter breakdown voltage | V(BR)CEO | IC= 10mA, IB=0 | 30 | | | V |
| Emitter-base breakdown voltage | V(BR)EBO | IE= 100μA, IC=0 | 6 | | | V |
| Collector cut-off current | ICBO | VCB= 40 V , IE=0 | | | 1 | μA |
| Collector cut-off current | ICEO | VCB= 30V , IE=0 | | | 10 | μA |
| Emitter cut-off current | IEBO | VEB= 6V , IC=0 | | | 1 | μA |
| DC current gain | hFE | VCE= 2V, IC= 1A | 60 | | 400 | |
| | hFE | VCE= 2V, IC= 500mA | 100 | | | |
| Collector-emitter saturation voltage | VCE(sat) | IC= 2A, IB= 0.2A | | | 0.5 | V |
| Base-emitter saturation voltage | VBE(sat) | IC= 2A, IB= 0.2A | | | 2 | V |
| Transition frequency | fT | VCE= 5V, IC= 0.1A f=1MHz | 50 | 80 | | MHz |
| Fall time | tf | IC=1A, IB1=- IB2=0.2A VCC=100V | | | 0.5 | μs |
| Storage time | ts | | 1.5 | | 4 | μs |

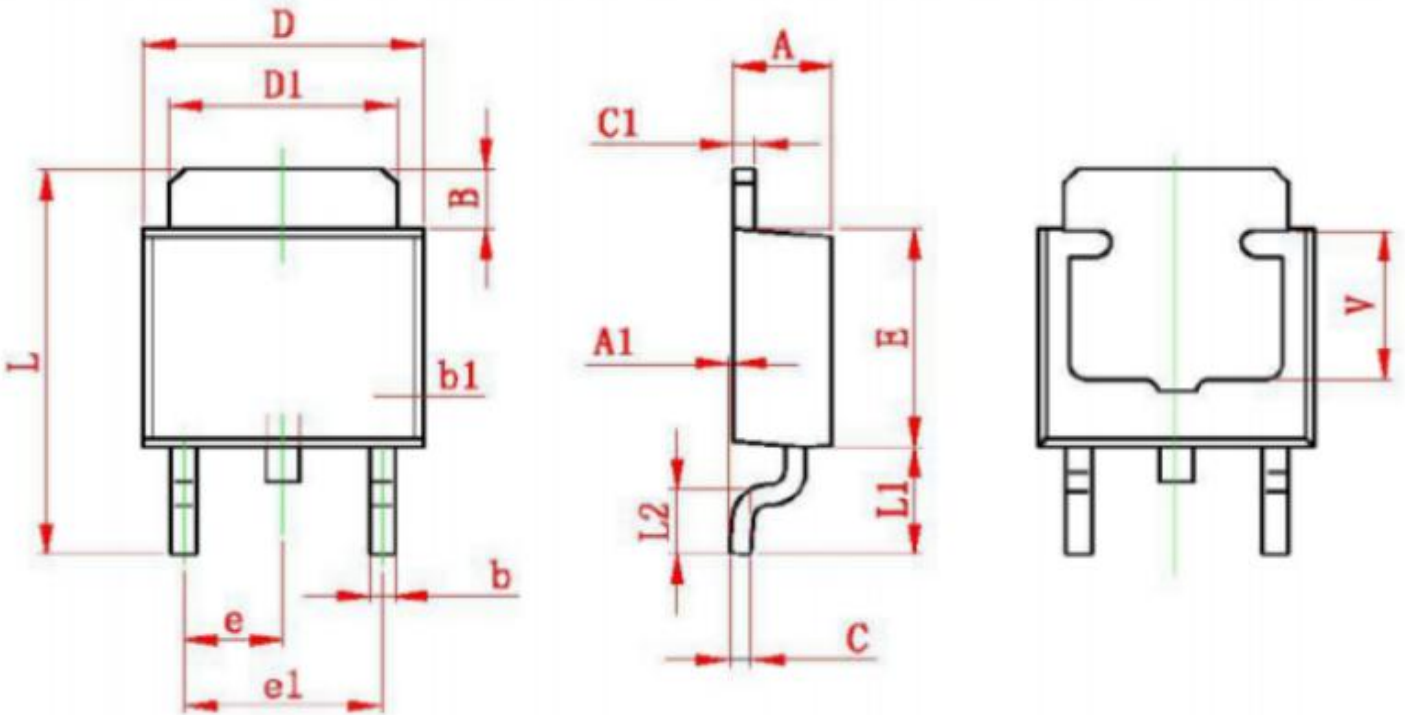
CLASSIFICATION OF hFE

| | |
|--------------|----------------|
| Rank | 2SD882 |
| Range | 160-320 |

TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

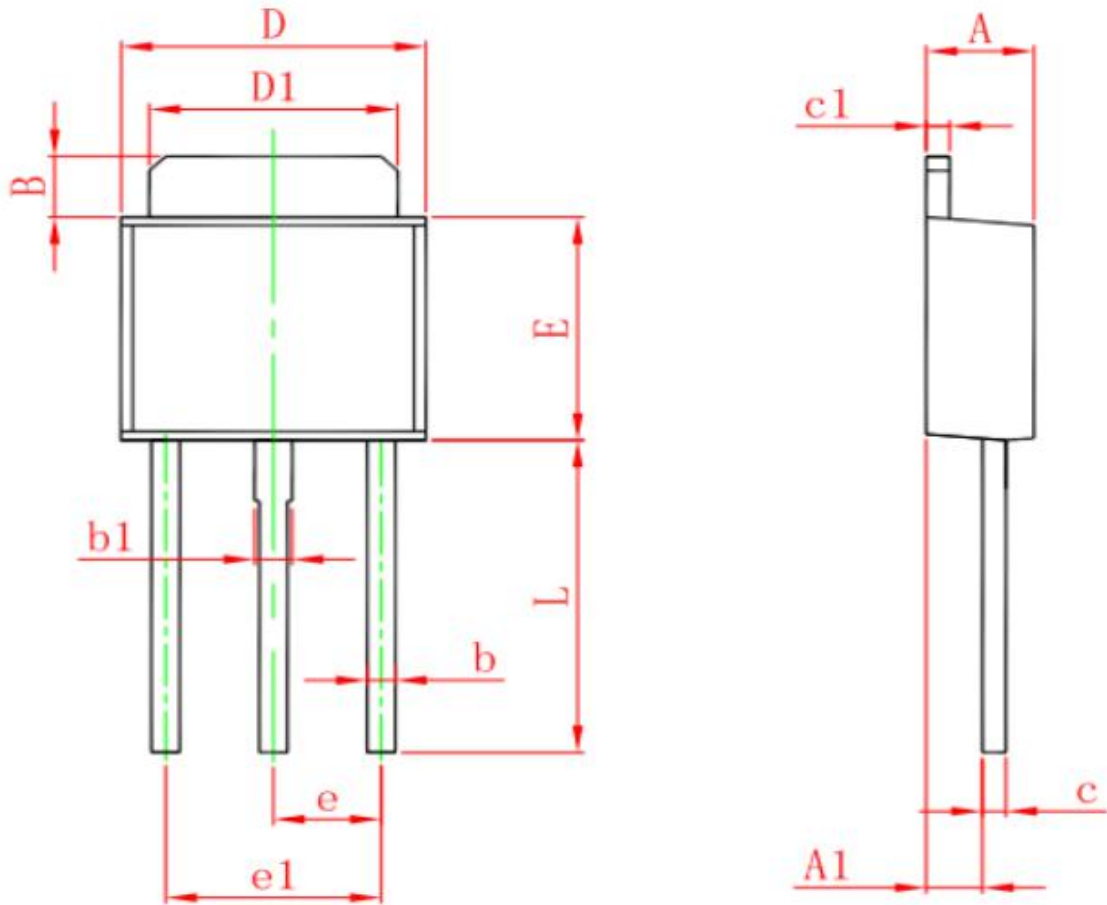


TO-252 PACKAGA OUTLINE DIMENSIONS



| 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 | 1.350 | 1.650 | 0.053 | 0.065 |
| b | 0.500 | 0.700 | 0.020 | 0.028 |
| b1 | 0.700 | 0.900 | 0.028 | 0.035 |
| c | 0.430 | 0.580 | 0.017 | 0.023 |
| c1 | 0.430 | 0.580 | 0.017 | 0.023 |
| D | 6.350 | 6.650 | 0.250 | 0.262 |
| D1 | 5.200 | 5.400 | 0.205 | 0.213 |
| E | 5.400 | 5.700 | 0.213 | 0.224 |
| e | 2.300 TYP | | 0.091 TYP | |
| e1 | 4.500 | 4.700 | 0.177 | 0.185 |
| L | 9.500 | 9.900 | 0.374 | 0.390 |
| L1 | 2.550 | 2.900 | 0.100 | 0.114 |
| L2 | 1.400 | 1.780 | 0.055 | 0.070 |
| V | 3.80 REF | | 0.150 REF | |

TO-251 PACKAGA OUTLINE DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.200 | 2.400 | 0.087 | 0.094 |
| A1 | 1.050 | 1.350 | 0.042 | 0.054 |
| B | 1.350 | 1.650 | 0.053 | 0.065 |
| b | 0.500 | 0.700 | 0.020 | 0.028 |
| b1 | 0.700 | 0.900 | 0.028 | 0.035 |
| c | 0.430 | 0.580 | 0.017 | 0.023 |
| c1 | 0.430 | 0.580 | 0.017 | 0.023 |
| D | 6.350 | 6.650 | 0.250 | 0.262 |
| D1 | 5.200 | 5.400 | 0.205 | 0.213 |
| E | 5.400 | 5.700 | 0.213 | 0.224 |
| e | 2.300 TYP. | | 0.091 TYP. | |
| e1 | 4.500 | 4.700 | 0.177 | 0.185 |
| L | 7.500 | 7.900 | 0.295 | 0.311 |