



东莞市华远电子有限公司

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TO-92 Plastic-Encapsulate Transistors

2SC1213

TRANSISTOR (NPN)

2SC1213A

FEATURE

Power dissipation

P_{CM} : 0.4 W ($T_{amb}=25$)

Collector current

I_{CM} : 0.5 A

Collector-base voltage

$V_{(BR)CBO}$: 2SC1213 : 35 V

2SC1213A : 50 V

Operating and storage junction temperature range

T_J, T_{stg} : -55 to +150

TO-92

1. EMITTER

2. COLLECTOR

3. BASE



1 2 3

ELECTRICAL CHARACTERISTICS ($T_{amb}=25$ unless otherwise specified)

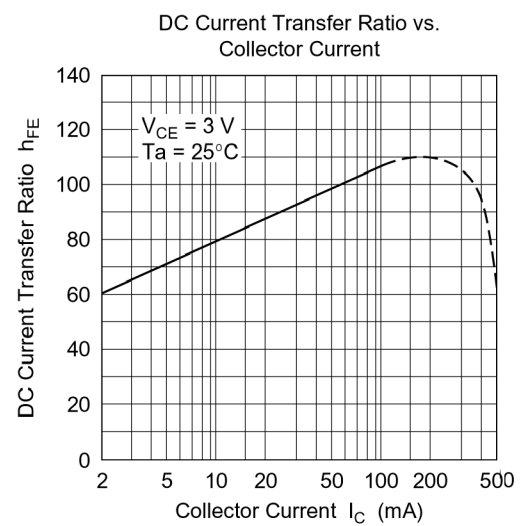
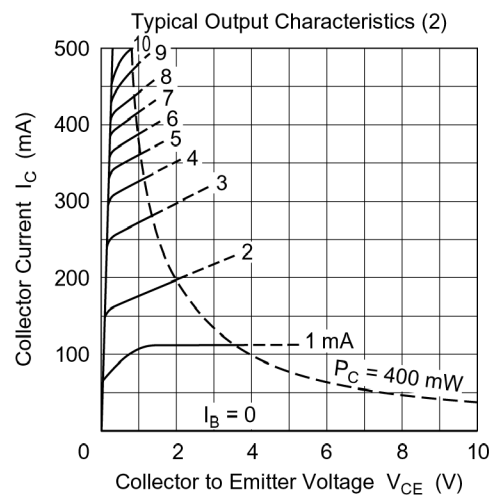
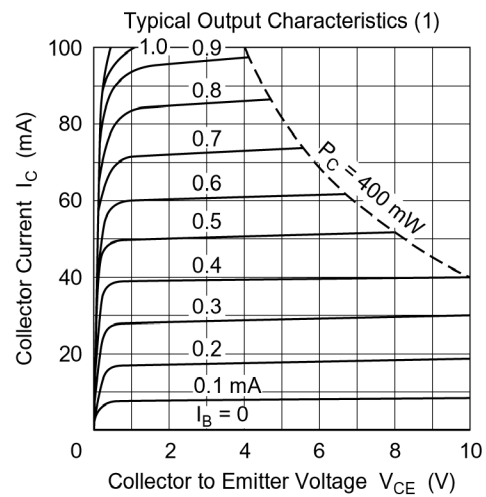
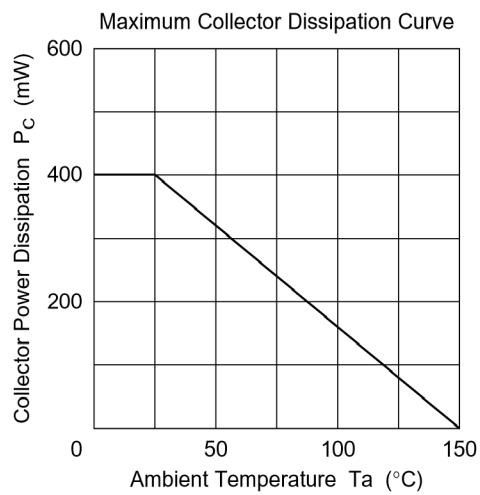
| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---------------|-------------------------------|----------|-----|------|---------|
| Collector-base breakdown voltage 2SC1213 2SC1213A | $V_{(BR)CBO}$ | $I_C = 10 \mu A$, $I_E = 0$ | 35 50 | | | V |
| Collector-emitter breakdown voltage 2SC1213 2SC1213A | $V_{(BR)CEO}$ | $I_C = 1 mA$, $I_B = 0$ | 35 50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 10 \mu A$, $I_C = 0$ | 4 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 20V$, $I_E = 0$ | | | 0.5 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = 3V$, $I_C = 10mA$ | 60 | | 320 | |
| | $h_{FE(2)}$ | $V_{CE} = 3V$, $I_C = 500mA$ | 10 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 150mA$, $I_B = 15 mA$ | | 0.2 | 0.6 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 3V$, $I_C = 10 mA$ | | | 0.75 | V |

CLASSIFICATION OF $h_{FE(1)}$

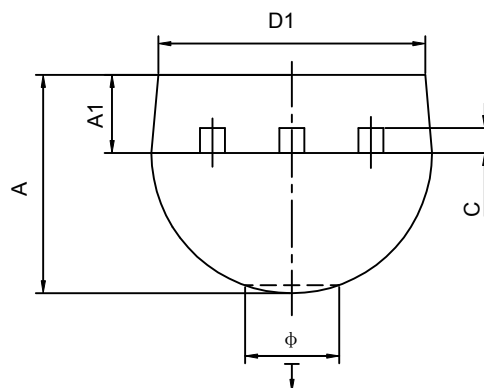
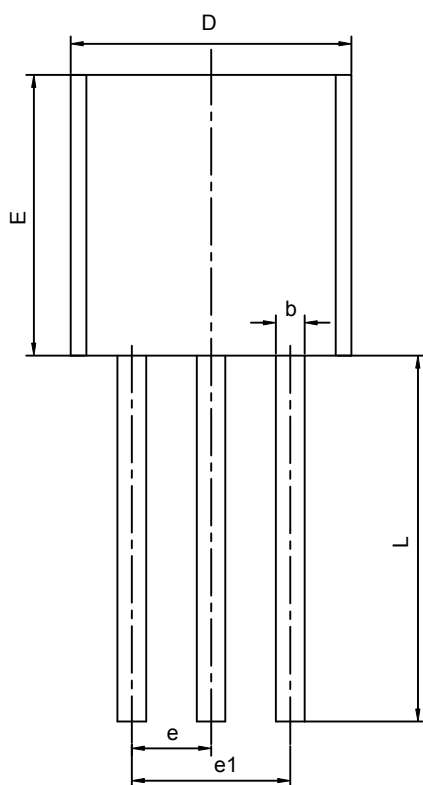
| Rank | B | C | D |
|-------|--------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 |

Typical Characteristics

2SC1213



TO-92 PACKAGE OUTLINE DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 3.300 | 3.700 | 0.130 | 0.146 |
| A1 | 1.100 | 1.400 | 0.043 | 0.055 |
| b | 0.380 | 0.550 | 0.015 | 0.022 |
| c | 0.360 | 0.510 | 0.014 | 0.020 |
| D | 4.400 | 4.700 | 0.173 | 0.185 |
| D1 | 3.430 | | 0.135 | |
| E | 4.300 | 4.700 | 0.169 | 0.185 |
| e | 1.270TYP | | 0.050TYP | |
| e1 | 2.440 | 2.640 | 0.096 | 0.104 |
| L | 14.100 | 14.500 | 0.555 | 0.571 |
| Ö | | 1.600 | | 0.063 |
| ↓ | 0.000 | 0.380 | 0.000 | 0.015 |