

# 东莞市华远电子有限公司

DONG GUAN SHI HUA YUAN ELECTRON CO.,LTD.

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## TO-92 Plastic-Encapsulate Transistors

2SA1300

TRANSISTOR (PNP )

#### **FEATURES**

Power dissipation

 $P_{CM}$ : 0.75 W (Tamb=25)

Collector current

I<sub>CM</sub> : -2 A

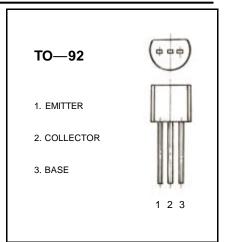
Collector-base voltage

 $V_{(BR)CBO}$ : -20

Operating and storage junction temperature range

T<sub>J</sub>: 150

 $T_{stg}$ : -55 to +150



#### ELECTRICAL CHARACTERISTICS (Tamb=25

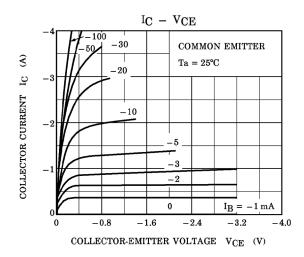
unless otherwise specified)

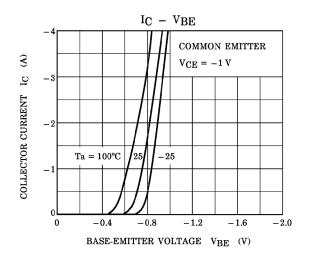
| Parameter                            | Symbol               | Test conditions  | MIN | MAX  | UNIT |
|--------------------------------------|----------------------|--|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | Ic=-1mA , I <sub>E</sub> =0                              | -20 |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =-10mA , I <sub>B</sub> =0                | -10 |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =-1 mA , I <sub>C</sub> =0                | -6  |      | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =-20 V , I <sub>E</sub> =0               |     | -0.1 | μΑ   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =-6 V , I <sub>C</sub> =0                |     | -0.1 | μΑ   |
| DC current gain                      | H <sub>FE</sub>      | V <sub>CE</sub> =-1V, I <sub>C</sub> =-0.5A              | 140 | 600  |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =-2A, I <sub>B</sub> = -100mA             |     | -0.5 | V    |
| Base-emitter voltage                 | $V_{BE}$             | I <sub>C</sub> = -2A, V <sub>CE</sub> =-1V               |     | -1.5 | V    |
| Transition frequency                 | f <sub>T</sub>       | $V_{CE}$ =-1 $V$ , $I_{C}$ =-0.5 $A$<br>f = 30 $M$ H $z$ | 100 |      | MHz  |

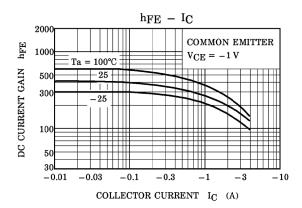
#### CLASSIFICATION OF HE

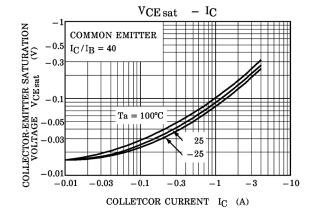
| Rank  | Υ       | GR      | BL      |
|-------|---------|---------|---------|
| Range | 140-280 | 200-400 | 300-600 |

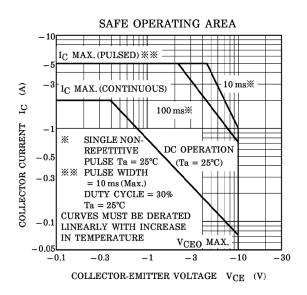
### **Typical Characteristics**

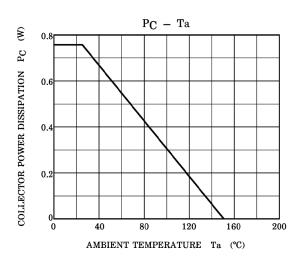












### **TO-92 PACKAGE OUTLINE DIMENSIONS**





| Symbol        | Dimensions In Millimeters |        | Dimensions In Inches |       |  |
|---------------|---------------------------|--------|----------------------|-------|--|
|               | Min                       | Max    | Min                  | Max   |  |
| Α             | 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 |  |
| С             | 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 |  |
| е             | 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 |  |
| $\overline{}$ | 0.000                     | 0.380  | 0.000                | 0.015 |  |