

### / Descriptions

TO-92      NPN      Silicon NPN transistor in a TO-92 Plastic Package.

### / Features

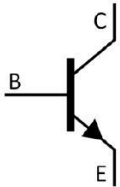
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The charge time is approximately 1 second , low  $V_{CE(sat)}$  and less power dissipation large current capacity, excellent linearity of  $h_{FE}$ .

### / Applications

Strobe applications.

### / Equivalent Circuit



### / Pinning



PIN1    Base      PIN 2    Collector      PIN 3    Emitter

### / hFE Classifications & Marking

See Marking Instructions.

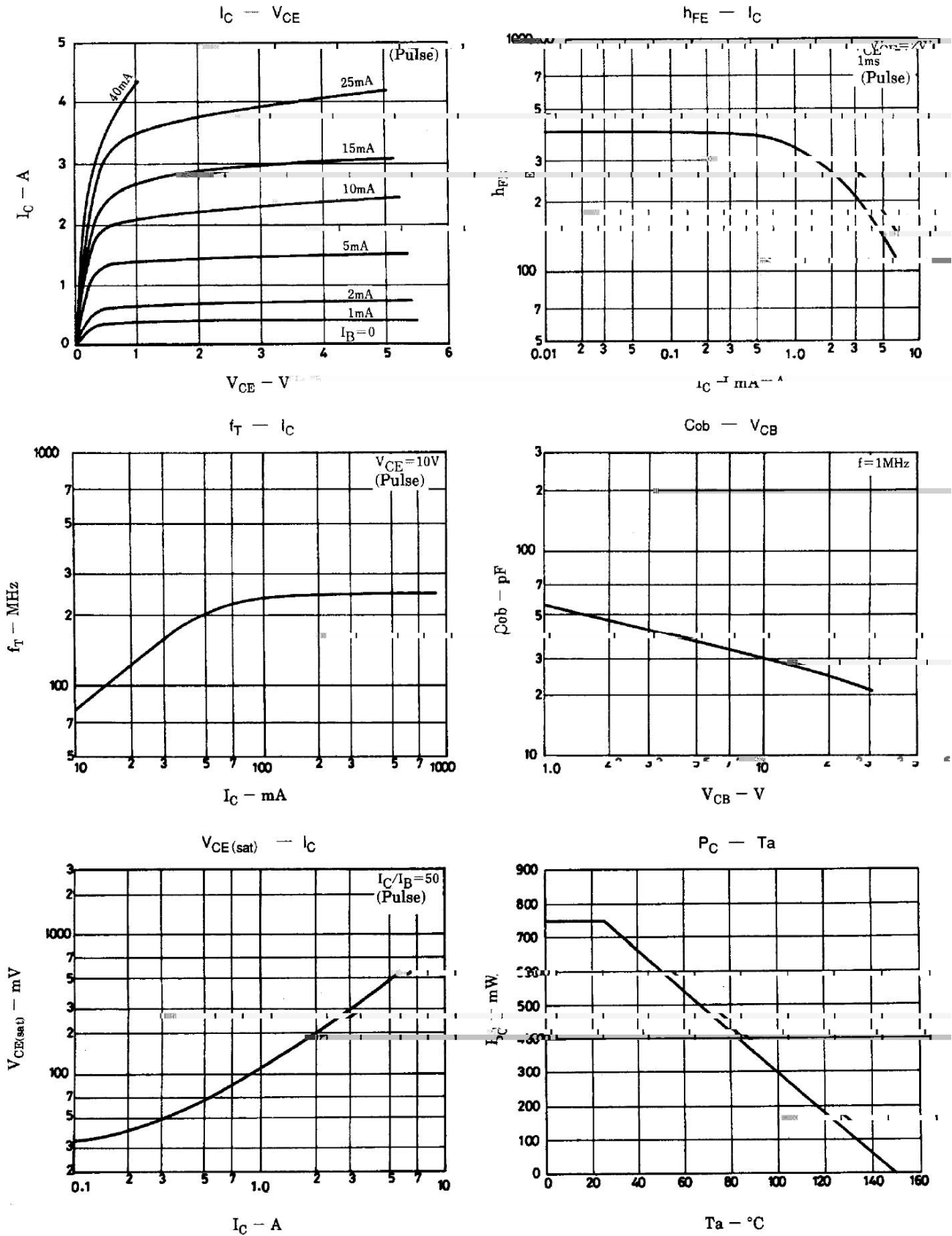
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                             | Symbol    | Rating  | Unit |
|---------------------------------------|-----------|---------|------|
| Collector to Base Voltage             | $V_{CBO}$ | 30      | V    |
| Collector to Emitter Voltage          | $V_{CEO}$ | 10      | V    |
| Emitter to Base Voltage               | $V_{EBO}$ | 6.0     | V    |
| Collector Current - Continuous        | $I_C$     | 3.0     | A    |
| Collector Current – Continuous(Pulse) | $I_{CP}$  | 5.0     | A    |
| Collector Power Dissipation           | $P_C$     | 750     | mW   |
| Junction Temperature                  | $T_J$     | 150     |      |
| Storage Temperature Range             | $T_{stg}$ | -55 150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol        | Test Conditions          | Min | Typ | Max | Unit    |
|-----------------------------------------|---------------|--------------------------|-----|-----|-----|---------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=10\mu A$ $I_E=0$    | 30  |     |     | V       |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=1.0mA$ $I_B=0$      | 10  |     |     | V       |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=10\mu A$ $I_C=0$    | 6.0 |     |     | V       |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=20V$ $I_E=0$     |     |     | 1.0 | $\mu A$ |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=4.0V$ $I_C=0$    |     |     | 1.0 | $\mu A$ |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=2.0V$ $I_C=3.0A$ | 140 | 210 |     |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=3.0A$ $I_B=60mA$    |     | 0.3 | 0.4 | V       |
| Transition Frequency                    | $f_T$         | $V_{CE}=10V$ $I_C=50mA$  |     | 200 |     | MHz     |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=10V$ $f=1.0MHz$  |     | 30  |     | pF      |

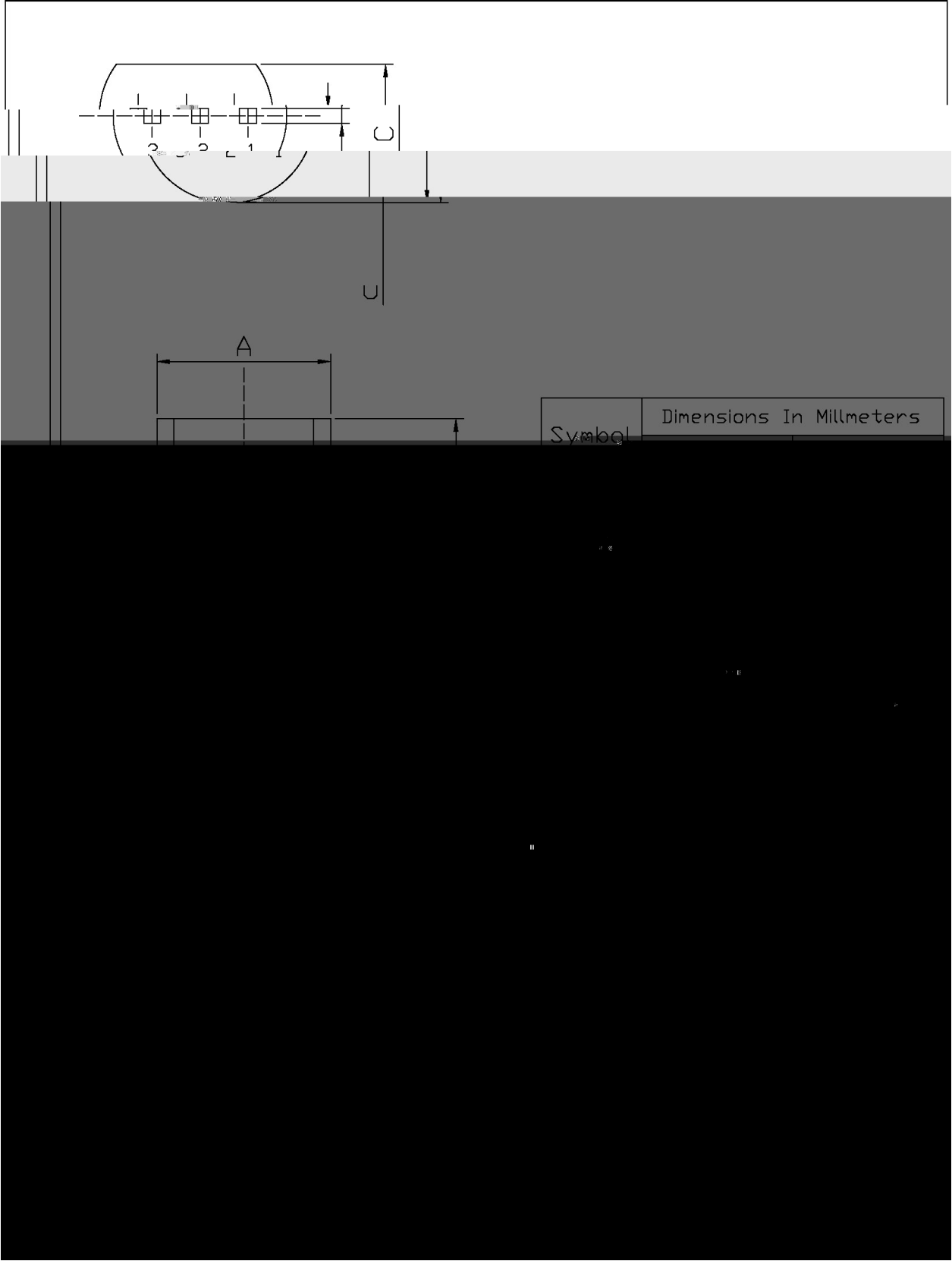
## I Electrical Characteristic Curve



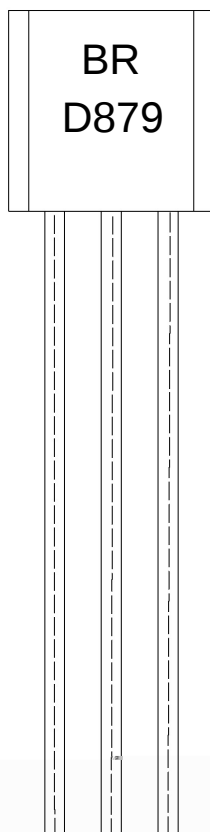
/ Package Dimensions

TO-92

Unit: mm



/ Marking Instructions



BR:

D879

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Note:

BR:                   Company Code.

D879:               Product Type.

\*\*\*\*:               Lot No. Code,code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |                                         |                                      |
|---|-------|-----|-----------|-----------------------------------------|--------------------------------------|
| 1 | 25    | 150 | 60        | 90sec;                                  | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 |     | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |                                      |
| 3 |       | 2   | 10 /sec.  | 3. Cooling Speed: 2~10 /sec.            |                                      |

/ Resistance to Soldering Heat Test Conditions

270±5      10±1 sec.      Temp:270±5      Time:10±1 sec

/ Packaging SPEC.

/ BULK

| Package Type<br>封装形式 | Units 包装数量 |    |    |    |    | Dimension 包装尺寸 (unit: mm3) |   |   |
|----------------------|------------|----|----|----|----|----------------------------|---|---|
|                      | 只袋         | 袋盒 | 只盒 | 盒箱 | 只箱 | 袋                          | 盒 | 箱 |
|                      |            |    |    |    |    |                            |   |   |

/ AMMO

| Package Type<br>封装形式 | Units 包装数量 |     |      |    |    | Dimension 包装尺寸 (unit: mm3) |            |
|----------------------|------------|-----|------|----|----|----------------------------|------------|
|                      | 只纸带        | 纸带盒 | 纸带层盒 | 盒箱 | 只箱 | 盒                          | 箱          |
|                      |            |     |      |    |    |                            | 小箱 ,<br>大箱 |

/ Notices