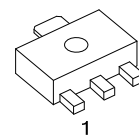
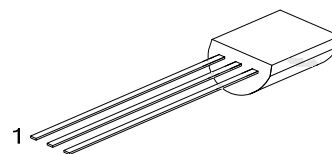


**2SD879****NPNEPITAXIAL SILICON TRANSISTOR****1.5V, 3V STROBE  
APPLICATIONS****■ DESCRIPTION**

The UTC **2SD879** is a NPN epitaxial silicon transistor, designed for 1.5V and 3V strobe applications.

**■ FEATURES**

- \* In applications where two NiCd batteries are used to provide 2.4V, two **2SD879**s are used.
- \* The charge time is approximately 1 second faster than that of germanium transistors.
- \* Less power dissipation because of  $I_{WO}$  Collector-to-Emitter Voltage  $V_{CE(SAT)}$ , permitting more flashes of light to be emitted.
- \* Large current capacity and highly resistant to break-down.
- \* Excellent linearity of  $h_{FE}$  in the region from low current to high current.

**SOT-89****TO-92****■ ORDERING INFORMATION**

| Ordering Number |               | Package | Pin Assignment |   |   | Packing   |
|-----------------|---------------|---------|----------------|---|---|-----------|
| Lead Free       | Halogen Free  |         | 1              | 2 | 3 |           |
| 2SD879L-AB3-R   | 2SD879G-AB3-R | SOT-89  | B              | C | E | Tape Reel |
| 2SD879L-T92-B   | 2SD879G-T92-B | TO-92   | E              | C | B | Tape Box  |
| 2SD879L-T92-K   | 2SD879G-T92-K | TO-92   | E              | C | B | Bulk      |
| 2SD879L-T92-R   | 2SD879G-T92-R | TO-92   | E              | C | B | Tape Reel |

Note: Pin Assignment: E: Emitter C: Collector B: Base

|                                                                                     |                                                                                                                     |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <p>2SD879L-AB3-R</p> <p>(1) Packing Type<br/>(2) Package Type<br/>(3) Lead Free</p> | <p>(1) R: Tape Reel, B: Tape Box, K: Bulk<br/>(2) AB3: SOT-89, T92: TO-92<br/>(3) G: Halogen Free, L: Lead Free</p> |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|

■ **ABSOLUTE MAXIMUM RATING** (  $T_A=25^{\circ}\text{C}$  , unless otherwise specified )

| PARAMETER                 | SYMBOL    | RATINGS    | UNIT               |
|---------------------------|-----------|------------|--------------------|
| Collector-Base Voltage    | $V_{CBO}$ | 30         | V                  |
| Collector-Emitter Voltage | $V_{CEX}$ | 20         | V                  |
| Collector-Emitter Voltage | $V_{CEO}$ | 10         | V                  |
| Emitter-Base Voltage      | $V_{EBO}$ | 6          | V                  |
| Collector Dissipation     | $P_D$     | 1          | W                  |
| Collector Current (DC)    | $I_C$     | 3          | A                  |
| Collector Current (PULSE) | $I_{CP}$  | 5          | A                  |
| Junction Temperature      | $T_J$     | 150        | $^{\circ}\text{C}$ |
| Storage Temperature       | $T_{STG}$ | -55 ~ +150 | $^{\circ}\text{C}$ |

Note 1. Pulse Condition -> 100 ms single pulse

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged.  
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ **ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$  , unless otherwise specified)

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                              | MIN | TYP  | MAX | UNIT          |
|--------------------------------------|---------------|----------------------------------------------|-----|------|-----|---------------|
| Collector-Base Voltage               | $V_{CBO}$     | $I_C=10\mu\text{A}$ , $I_E=0$                | 30  |      |     | V             |
| Collector-Emitter Voltage            | $V_{CEX}$     | $I_C=1\text{mA}$ , $V_{BE}=3\text{V}$        | 20  |      |     | V             |
| Collector-Emitter Voltage            | $V_{CEO}$     | $I_C=1\text{mA}$ , $R_{BE}=\infty$           | 10  |      |     | V             |
| Emitter-Base Voltage                 | $V_{EBO}$     | $I_E=10\mu\text{A}$ , $I_C=0$                | 6   |      |     | V             |
| Base-Emitter Voltage                 | $V_{BE}$      | $V_{CE}=-1\text{V}$ , $I_C=-2\text{A}$       |     | 0.83 | 1.5 | V             |
| Collector Cut-Off Current            | $I_{CBO}$     | $V_{CB}=20\text{V}$ , $I_E=0$                |     |      | 1   | $\mu\text{A}$ |
| Emitter Cut-Off Current              | $I_{EBO}$     | $V_{EB}=4\text{V}$ , $I_C=0$                 |     |      | 1   | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$      | $V_{CE}=2\text{V}$ , $I_C=3\text{A}$ (pulse) | 140 | 210  | 400 |               |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=3\text{A}$ , $I_B=60\text{mA}$ (pulse)  |     | 0.3  | 0.4 | V             |
| Current Gain Bandwidth Product       | $f_T$         | $V_{CE}=10\text{V}$ , $I_C=50\text{mA}$      |     | 200  |     | MHz           |
| Output Capacitance                   | $C_{OB}$      | $V_{CB}=10\text{V}$ , $f=1\text{MHz}$        |     | 30   |     | pF            |

Pulse: 1mS

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