



## 2SD879

## NPN EPITAXIAL SILICON TRANSISTOR

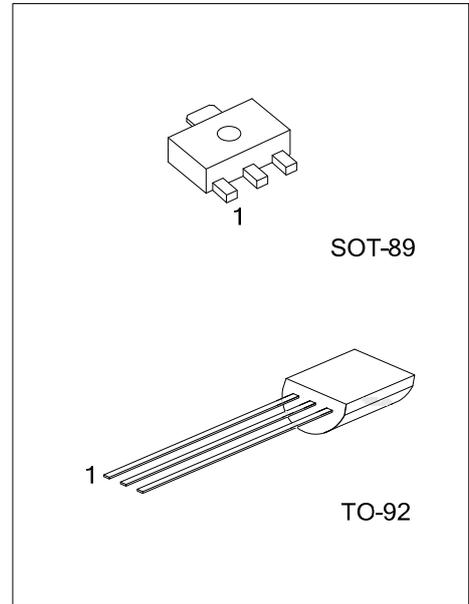
### 1.5V, 3V STROBE APPLICATIONS

#### 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 **2SD879s** 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.



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	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

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

<p>2SD879G-AB3-R</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk                  (2) AB3: SOT-89, T92: TO-92                  (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

SOT-89	TO-92

■ 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	$^{\circ}\text{C}$

Notes: 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	$V_{BE(ON)}$	$V_{CE}=1\text{V}$ , $I_C=2\text{A}$		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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