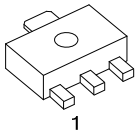
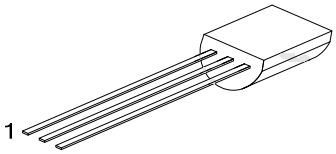
2SD879

NPN EPITAXIAL SILICON TRANSISTOR

1.5V, 3V STROBE APPLICATIONS



SOT-89



TO-92

■ 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.

■ 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

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

■ ABSOLUTE MAXIMUM RATING (T_A=25℃ ,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	℃
Storage Temperature	T_{STG}	-55 ~ +150	℃

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℃, unless otherwise specified)

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

Pulse: 1mS