



# 2SD879

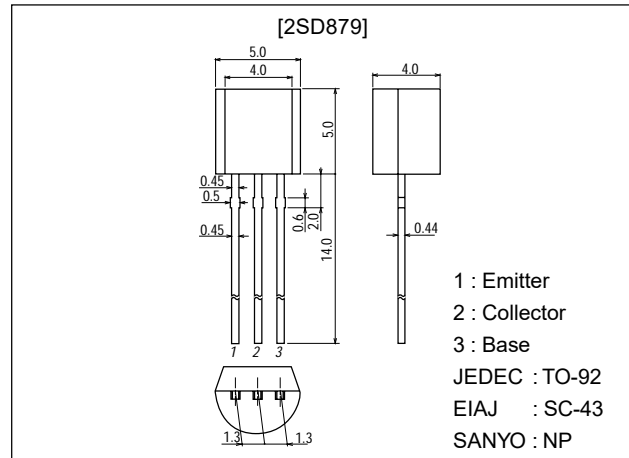
## 1.5V, 3V Strobe Applications

### 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 low Collector-to-Emitter Voltage  $V_{CE(sat)}$ , permitting more flashes of light to be emitted.
- Small package and large allowable collector dissipation (TO-92,  $PC=750mW$ ).
- Large current capacity and highly resistant to breakdown.
- Excellent linearity of  $h_{FE}$  in the region from low current to high current.

### Package Dimensions

unit:mm  
2003B



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		30	V
Collector-to-Emitter Voltage	$V_{CEX}$		20	V
	$V_{CEO}$		10	V
	$V_{EBO}$		6	V
Collector Current	$I_C$		3	A
Collector Current (Pulse)	$I_{CP}$	100ms single pulse	5	A
Collector Dissipation	$PC$		750	mW
Junction Temperature	$T_J$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

#### Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20V, I_E=0$			1.0	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			1.0	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=2V, I_C=3A$ (pulse)	140	210		
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=50mA$		200		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		30		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3A, I_B=60mA$ (pulse)		0.3	0.4	V

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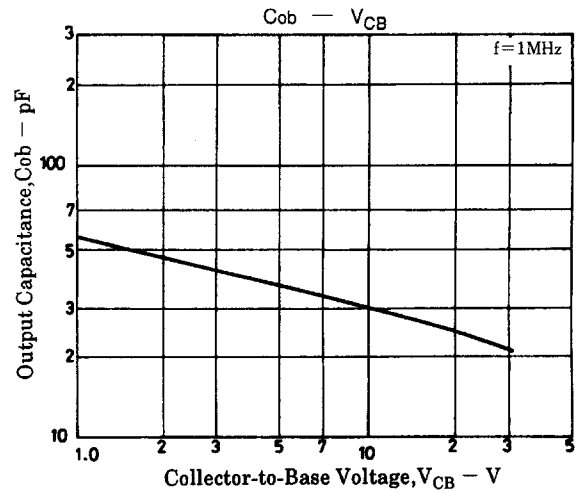
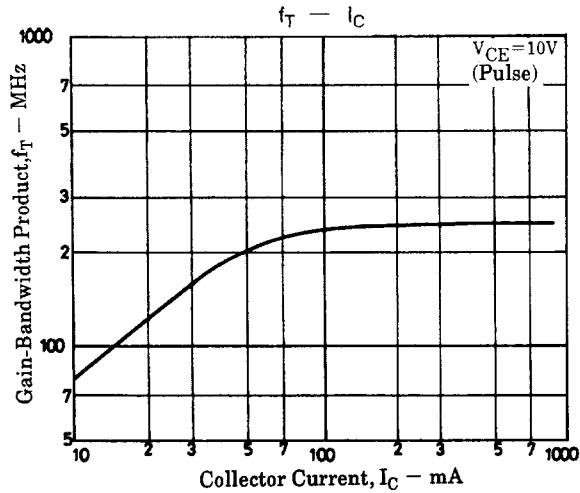
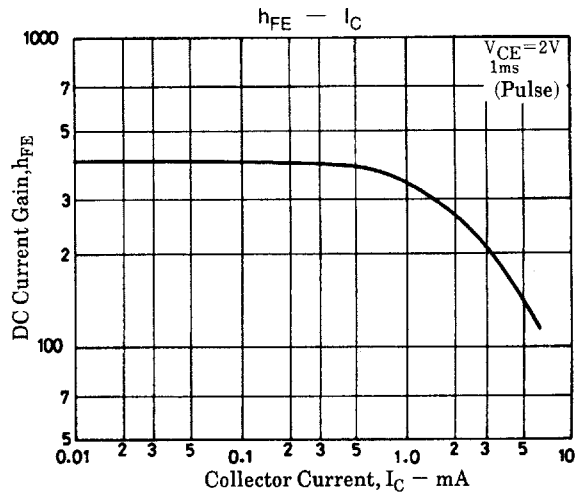
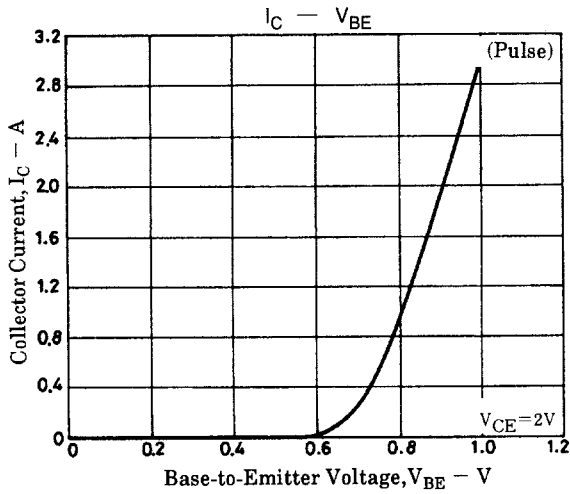
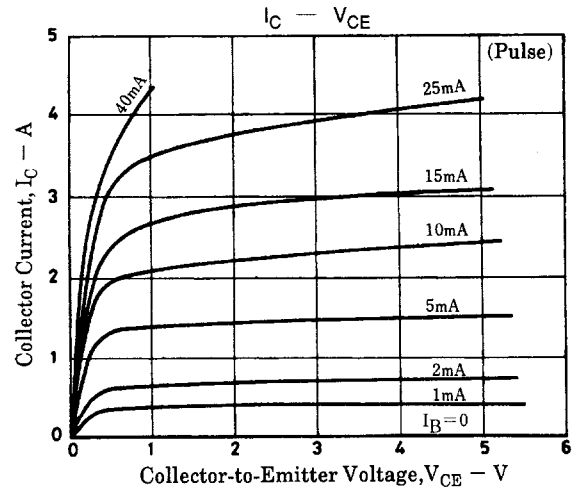
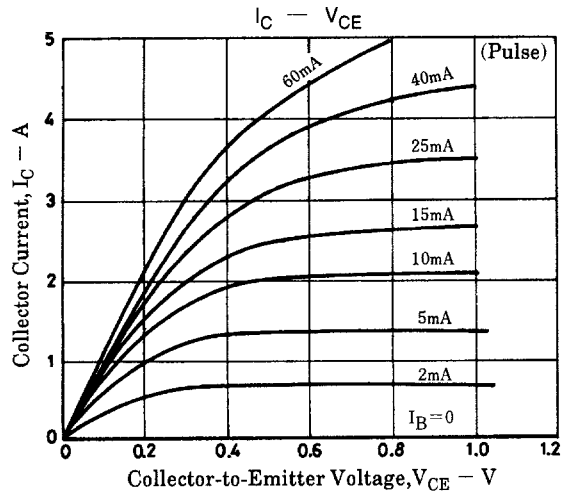
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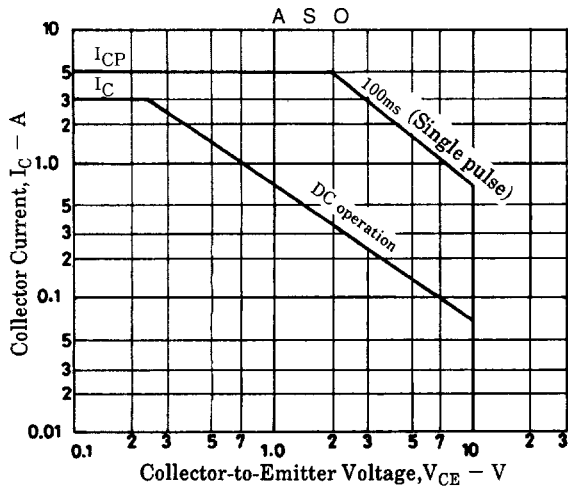
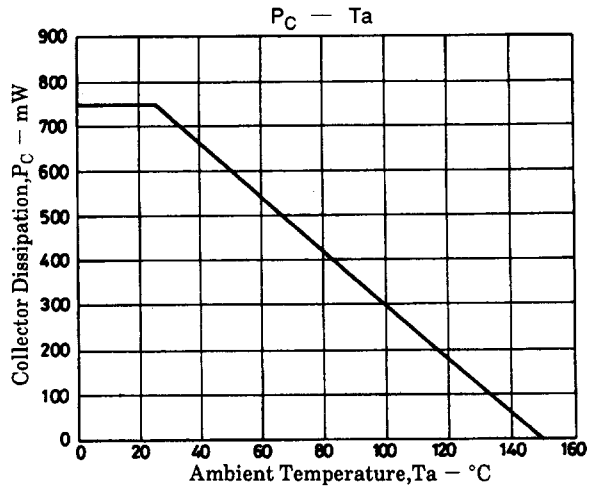
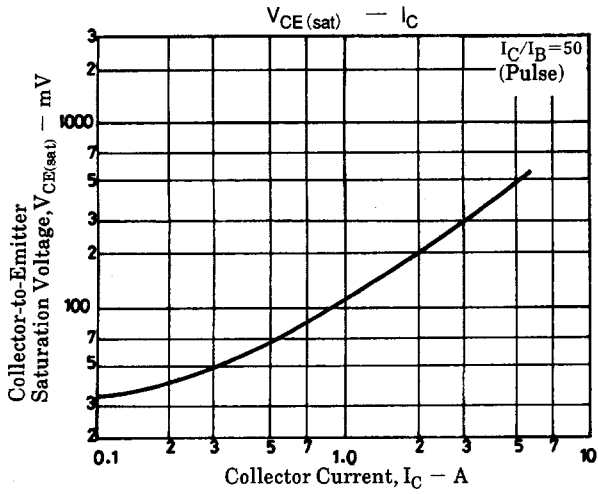
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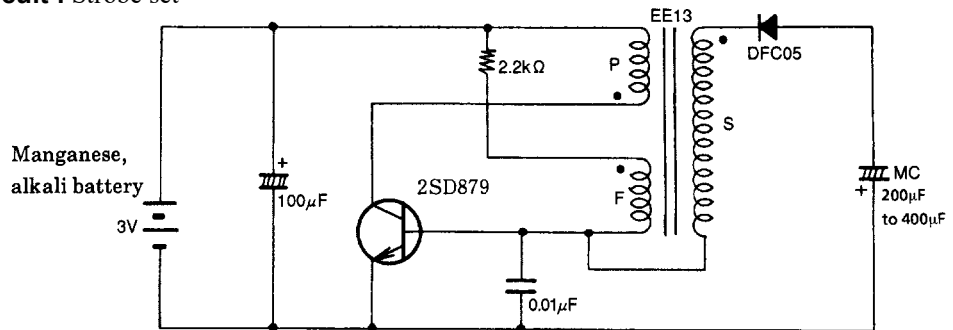
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEX}$	$I_C=1mA, V_{BE}=3V$	20			V
	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V



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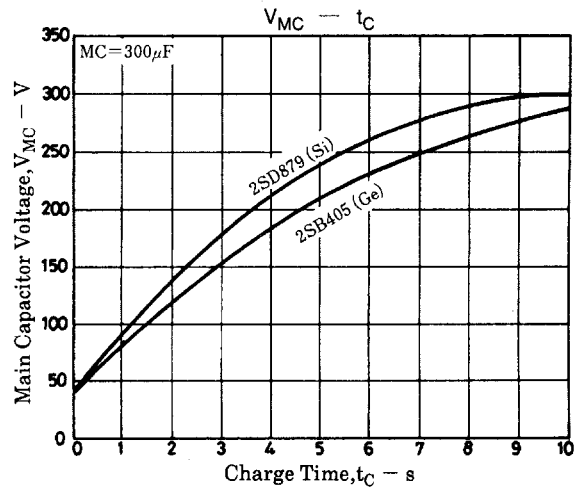
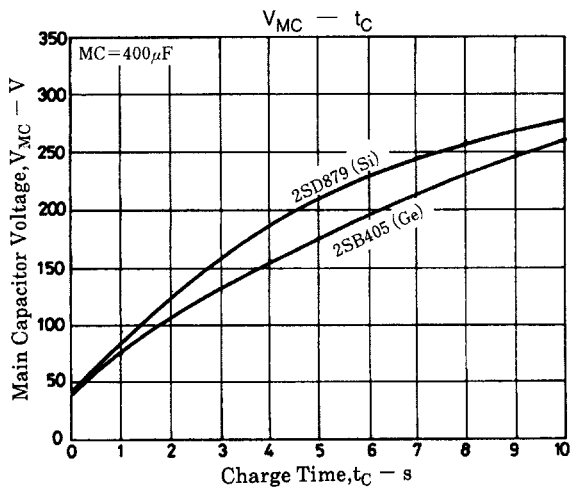


## Sample Application Circuit : Strobe set

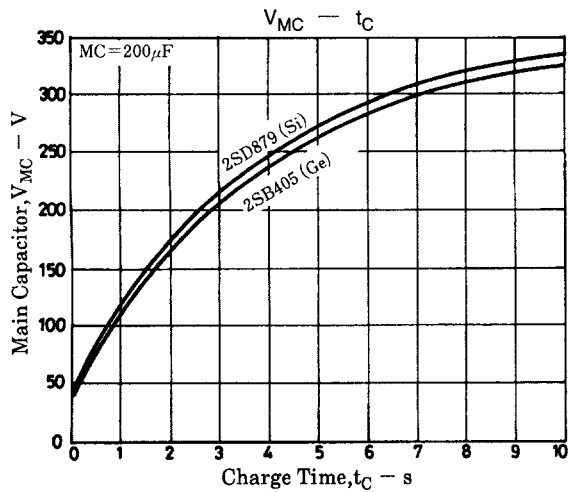


Core : EE13  
(Kijima Wireless)

Number of turns specified for transformer P :  $0.55 \phi \times 10 \frac{3}{4}T$ , S :  $0.07 \phi \times 1350T$   
F :  $0.23 \phi \times 12 \frac{3}{4}T$



## 2SD879



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