

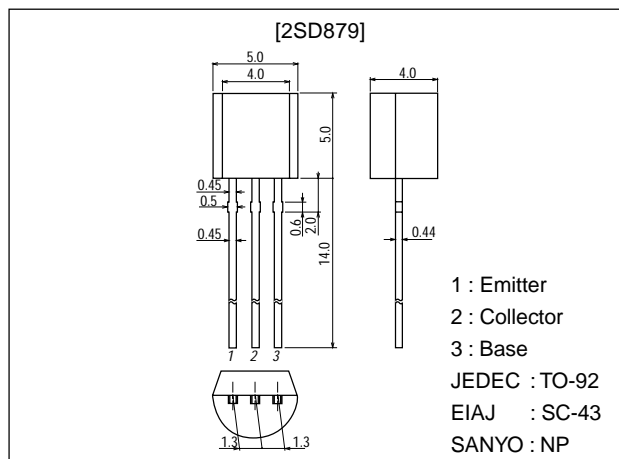
**2SD879****1.5V, 3V Strobe Applications****Features**

- 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, $P_C=750mW$).
- 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
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}	100ms single pulse	5	A
Collector Dissipation	P_C		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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			1.0	μA
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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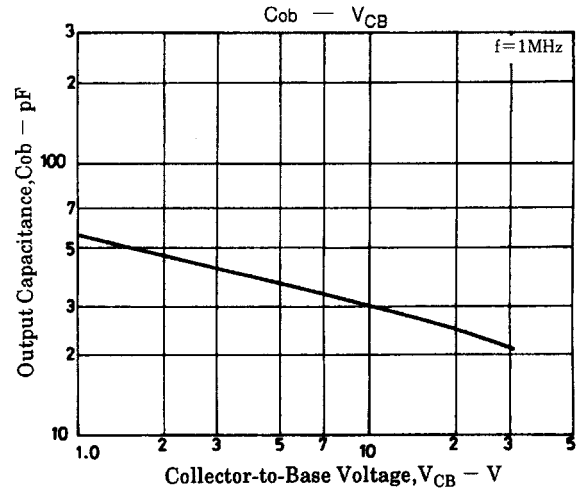
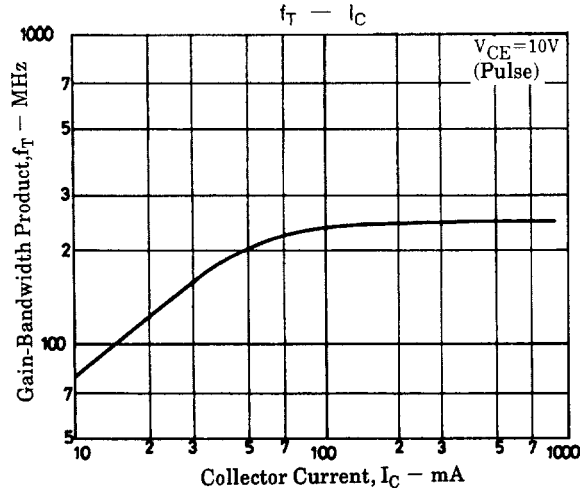
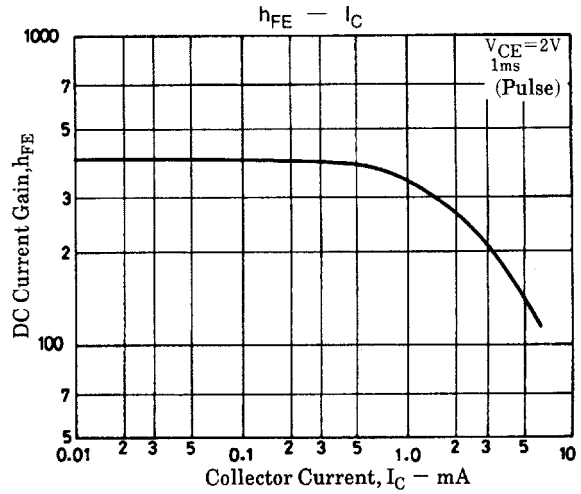
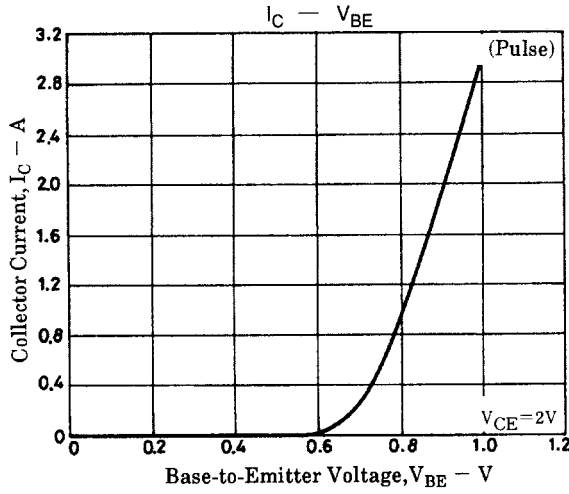
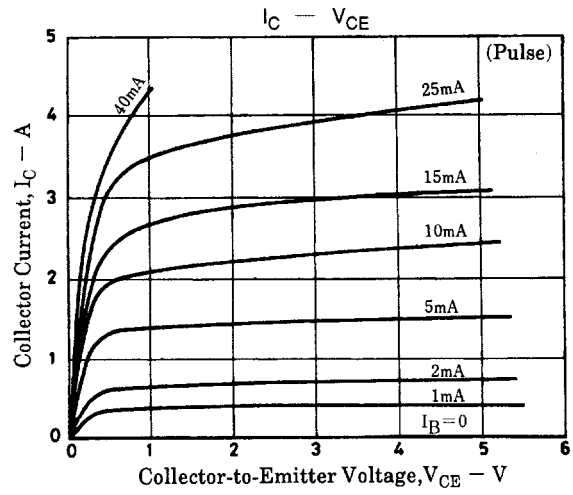
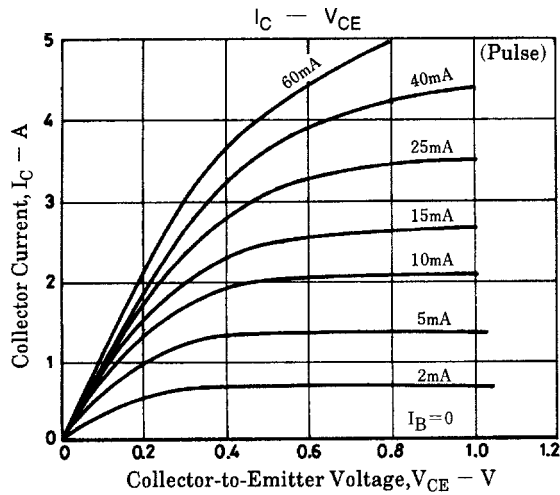
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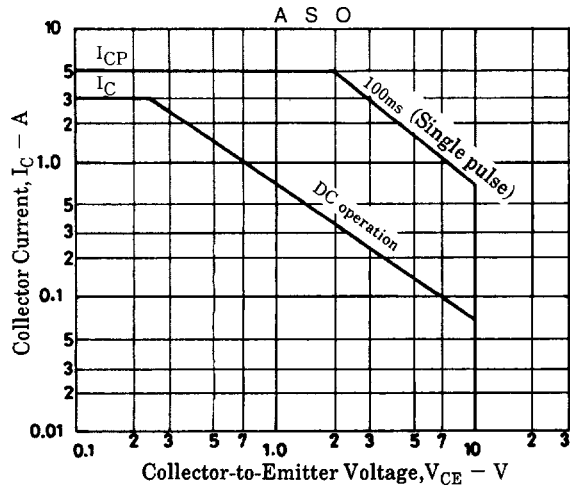
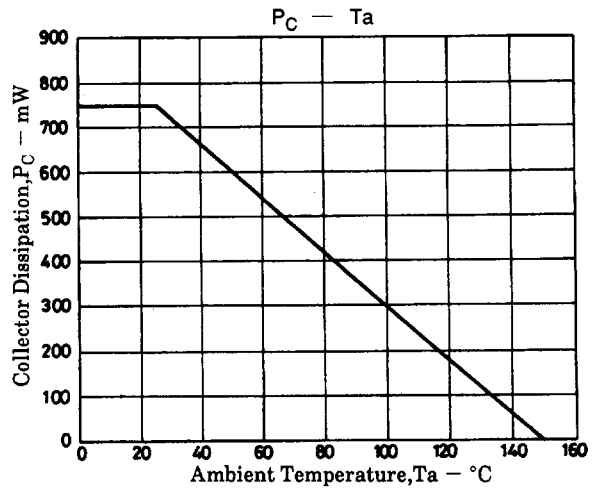
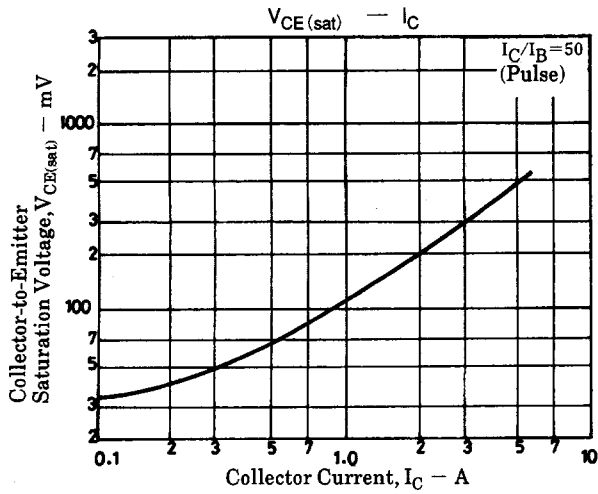
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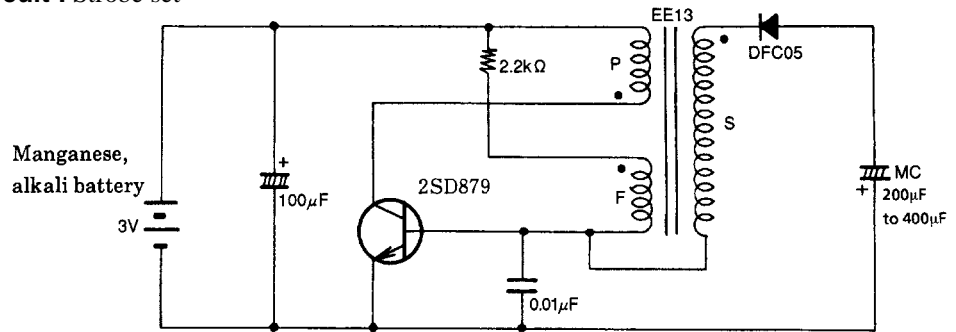
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEX}$	$I_C=1mA, V_{BE}=3V$	20			V
	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V



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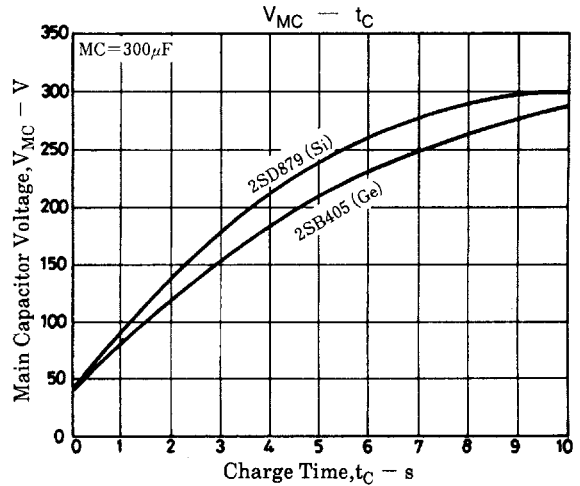
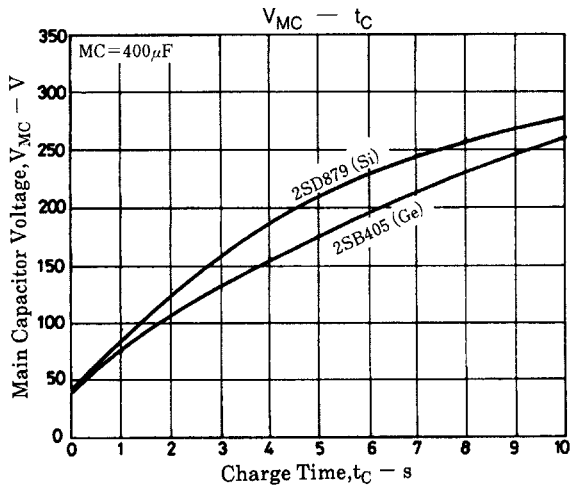


Sample Application Circuit : Strobe set

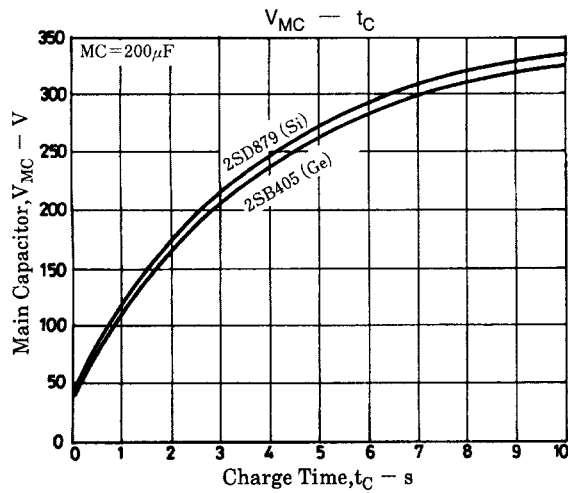


Core : EE13
(Kijima Wireless)

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



2SD879



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