Ordering number:EN550F

NPN Epitaxial Planar Silicon Transistor

2SD879

1.5V, 3V Strobe Applications

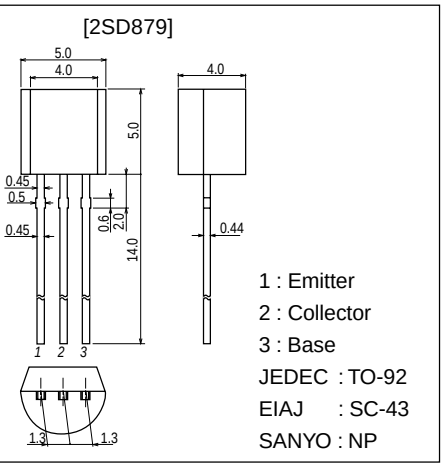
Features

- 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 Ta = 25˚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	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚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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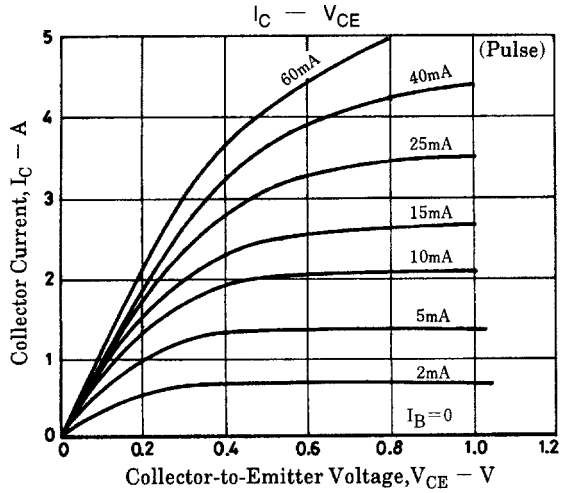
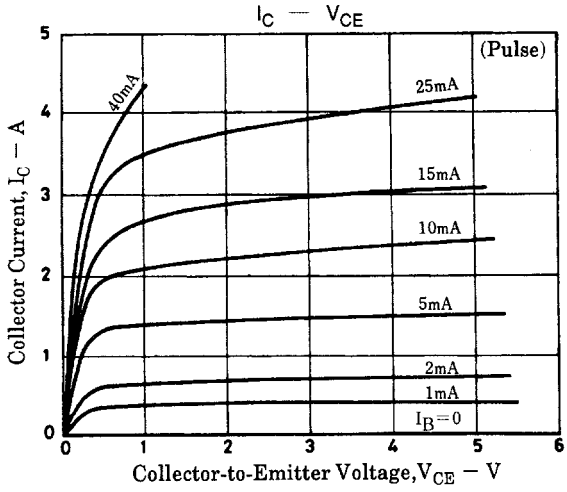
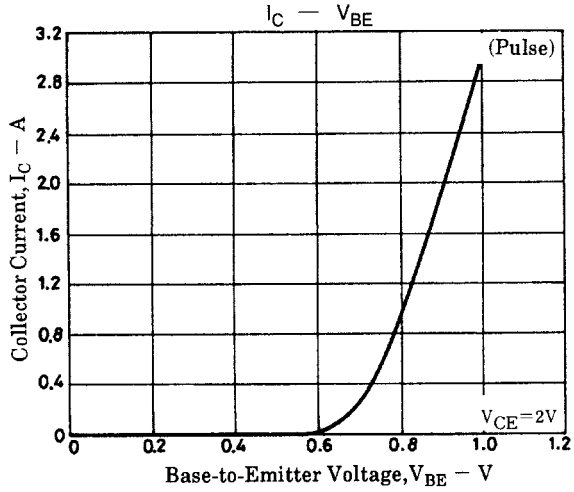
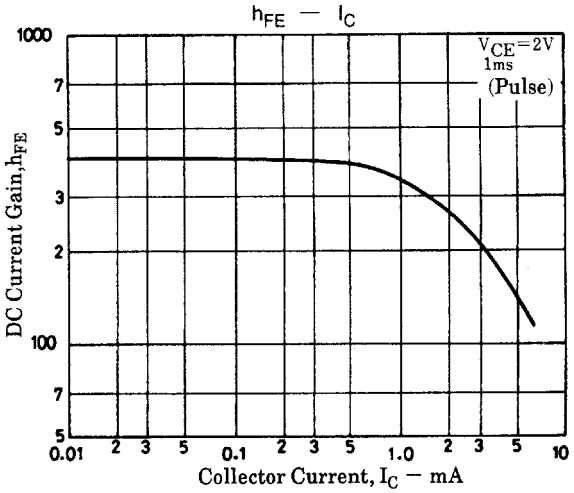
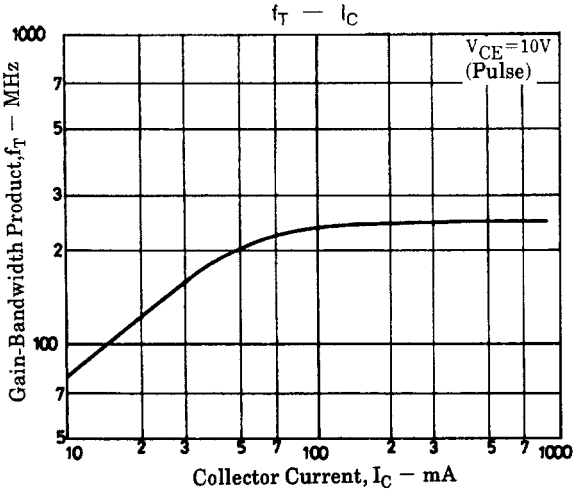
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEX}$	I_C=1mA, V_{BE}=3V	20			V
	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6			V

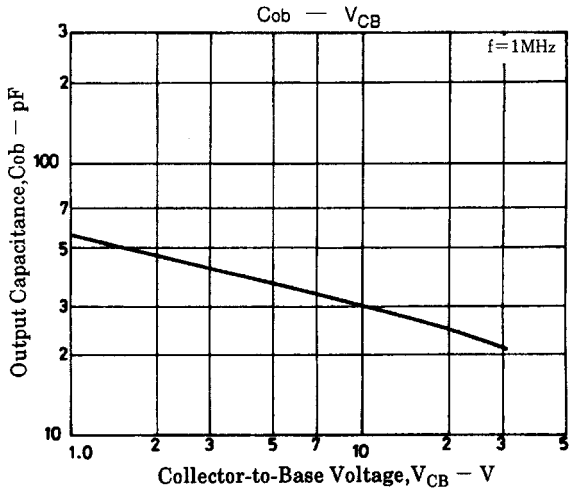


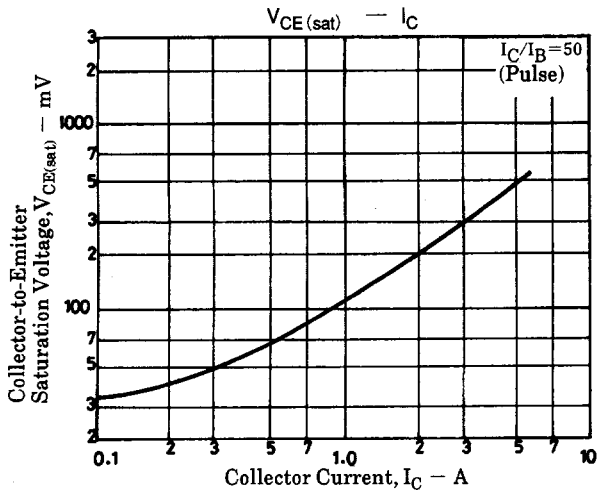


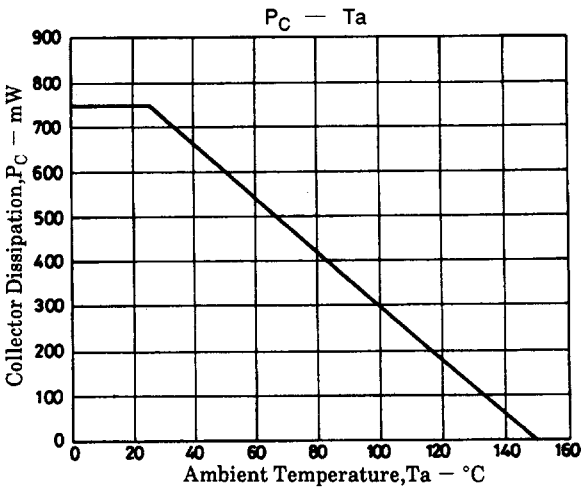


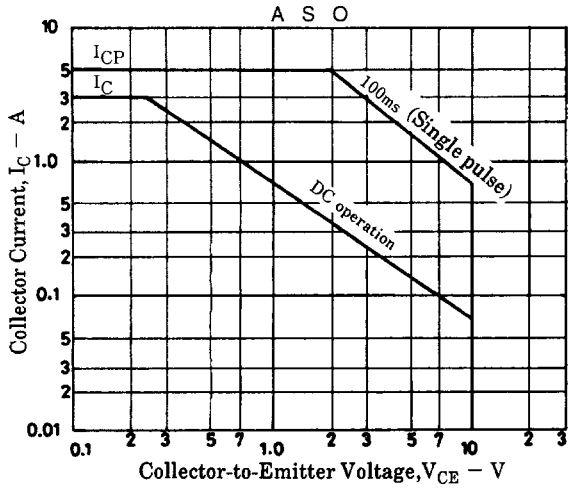




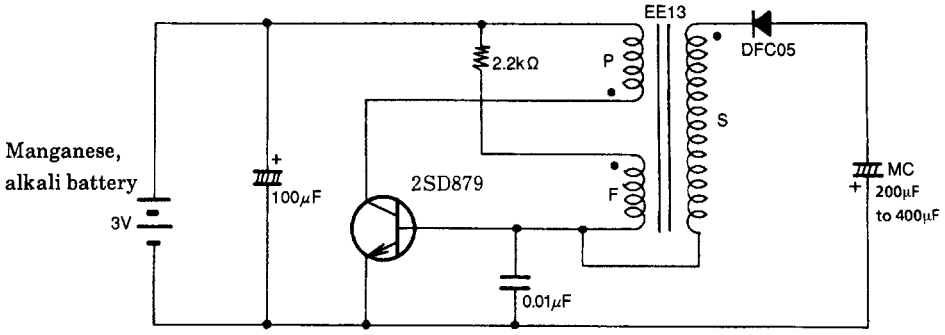








Sample Application Circuit : Strobe set



Core : EE13 (Kijima Wireless)

Number of turns specified for transformer P : 0.55 ϕ × 10 3/4T, S : 0.07 ϕ × 1350T
F : 0.23 ϕ × 12 3/4T