Ordering number: EN550F

SANYO

No.550F

2SD879

NPN Epitaxial Planar Silicon Transistor

1.5V, 3V Strobe Applications

Applications

- 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.

Absolute Maximum Ratings at Ta=25°C

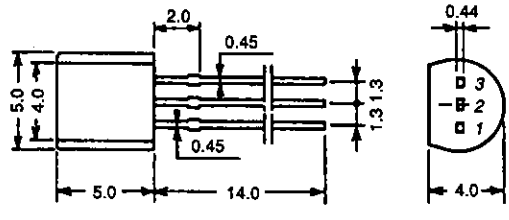
				unit
Collector-to-Base Voltage	V_{CBO}		30	V
Collector-to-Emitter Voltage	V_{CEX}		20	V
Collector-to-Emitter Voltage	V_{CEO}		10	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}	100ms single pulse	5	A
Collector Dissipation	P_C		750	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
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	Cob	$V_{CB}=10V$, f=1MHz		30		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=3A, I_B=60mA$ (pulse)		0.3	0.4	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
C-E Breakdown Voltage	$V_{(BR)CEX}$	$I_C=1mA, V_{BE}=3V$	20			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	10			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V

Package Dimensions 2003B

(unit : mm)

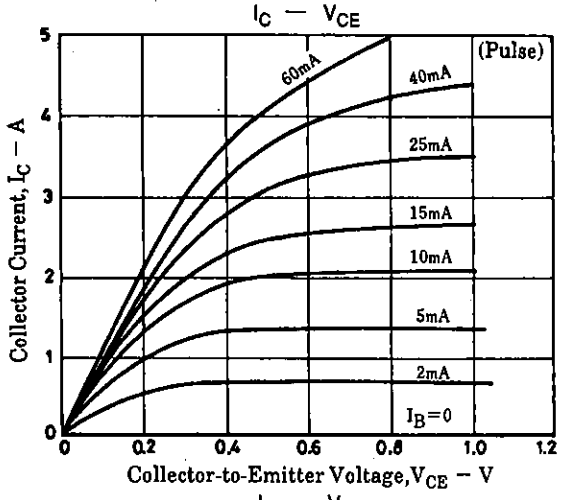


JEDEC : TO−92
EIAJ : SC−43
SANYO : NP

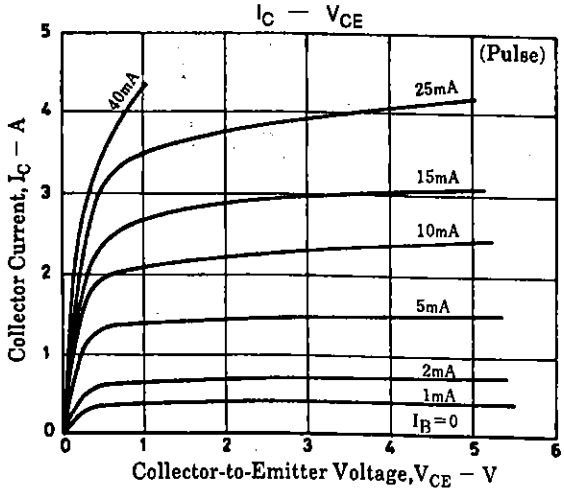
1. Emitter
2. Collector
3. Base

SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1-Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

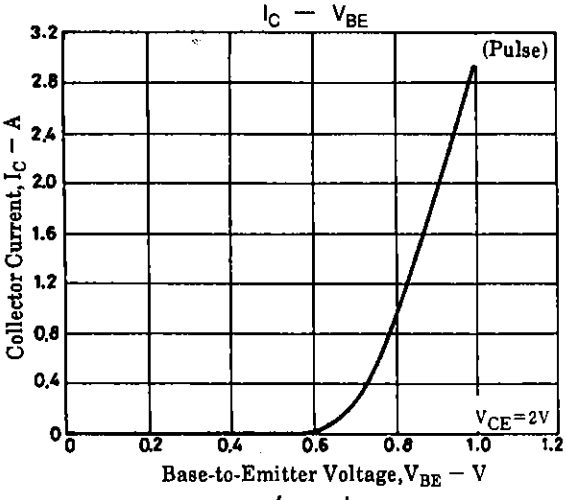
I_C — V_{CE}



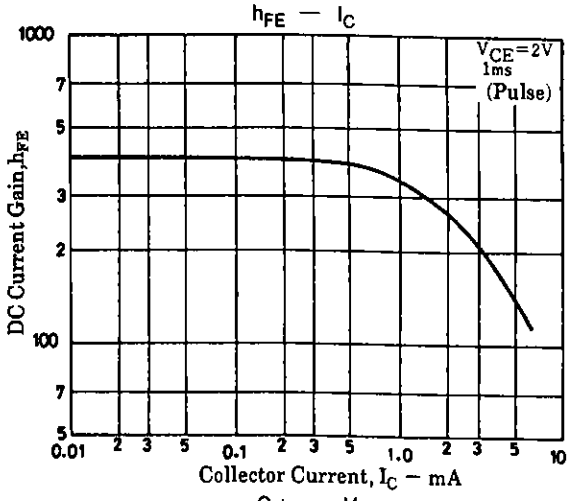
I_C — V_{CE}



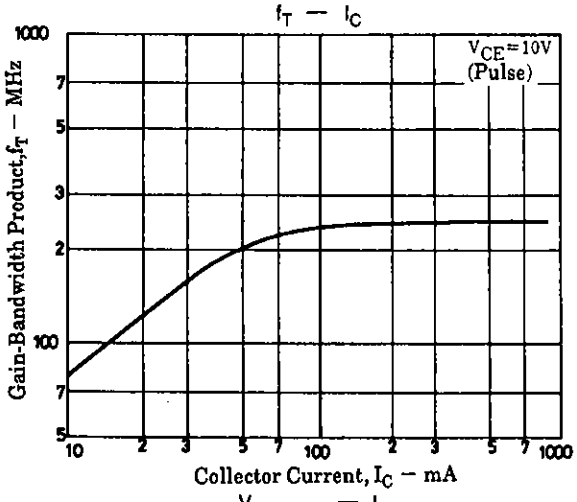
I_C — V_{BE}



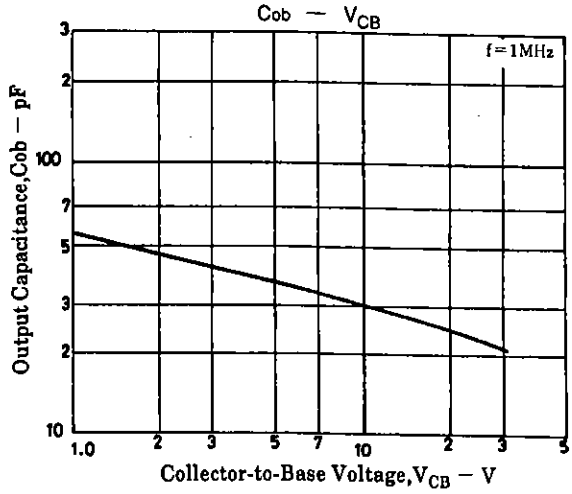
h_{FE} — I_C



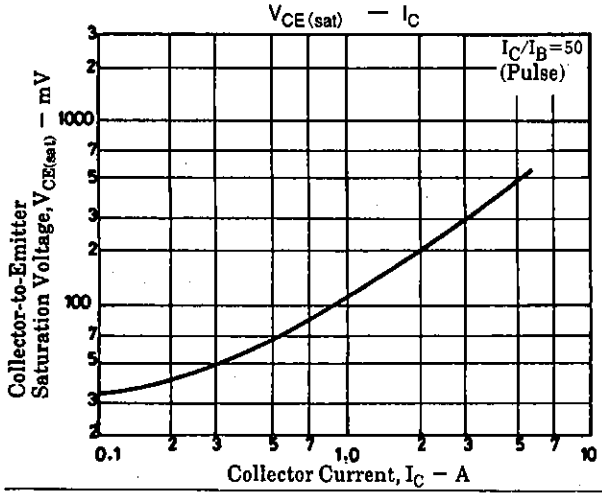
f_T — I_C



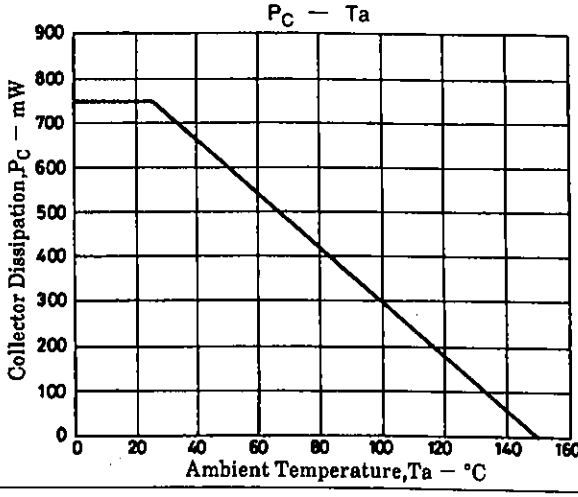
Cob — V_{CB}

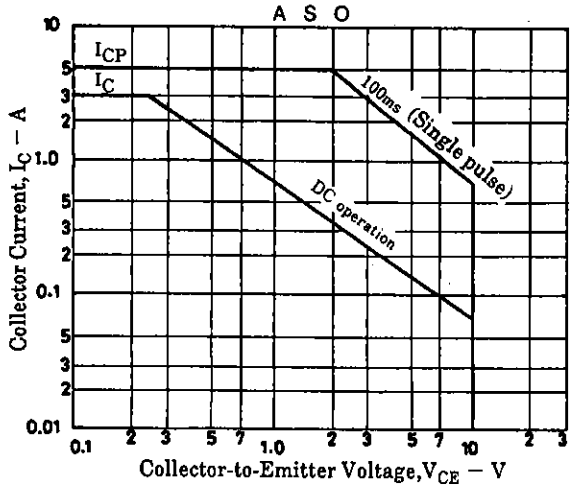


$V_{CE(sat)}$ — I_C

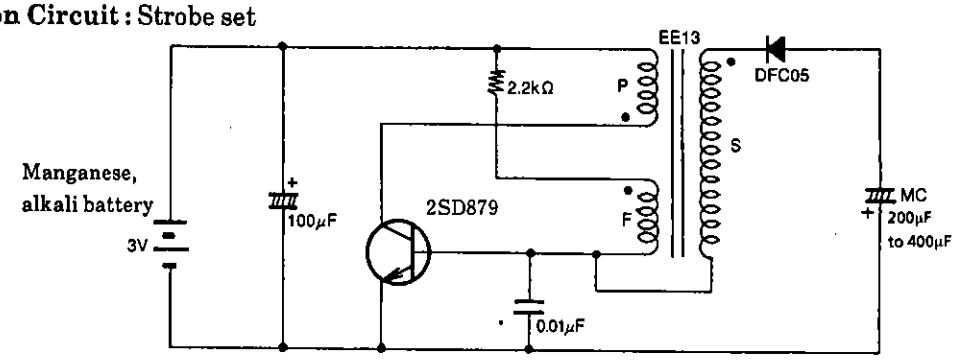


P_C — Ta





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