

SANYO

No.538E

2SD826

NPN Epitaxial Planar Type Silicon Transistor

3V, 6V STROBE APPLICATIONS

Features

- . Low saturation voltage.
- . High h_{FE} .
- . Large current capacity.

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

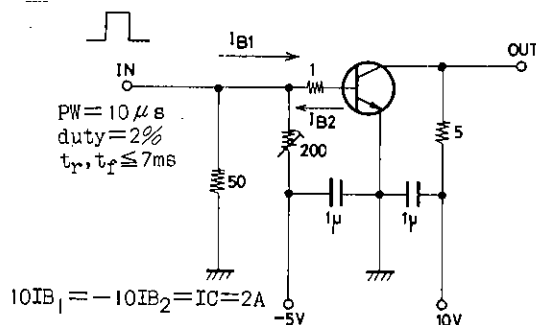
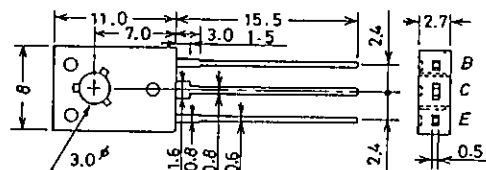
			unit
Collector-to-Base Voltage	V_{CBO}	60	V
Collector-to-Emitter Voltage	V_{CEO}	20	V
Emitter-to-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Peak Collector Current	i_{cp}	8	A
Collector Dissipation	P_C	1.0	W
		$T_c=25^\circ\text{C}$	
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	120*		560*	
	$h_{FE}(2)$	$V_{CE}=2\text{V}, I_C=3\text{A(Pulse)}$	95			
Gain Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}$		120		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		45		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=60\text{mA(Pulse)}$			0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=3\text{A}, I_B=60\text{mA(Pulse)}$			1.5	V
Turn On Time	t_{on}	See specified Test Circuit.		30		ns
Fall Time	t_f	"		40		ns
	t_{stg}	"		300		ns

*: The 2SD826 is classified by 0.5A h_{FE} as follows:

120	E	200	160	F	320	280	G	560
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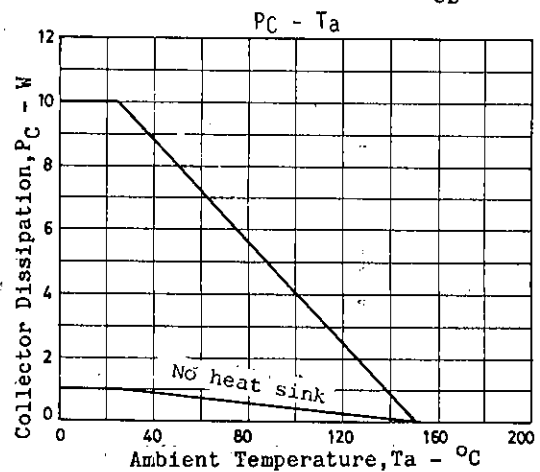
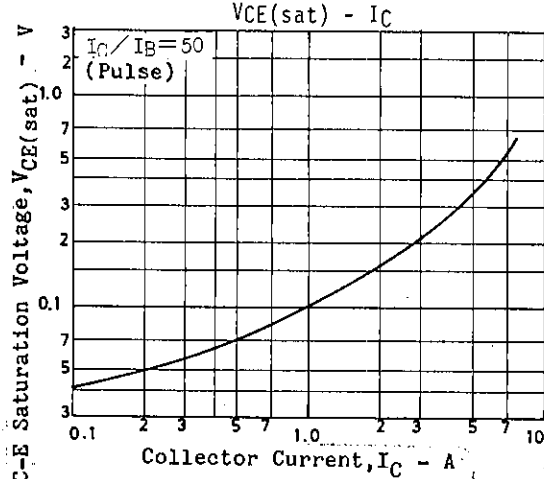
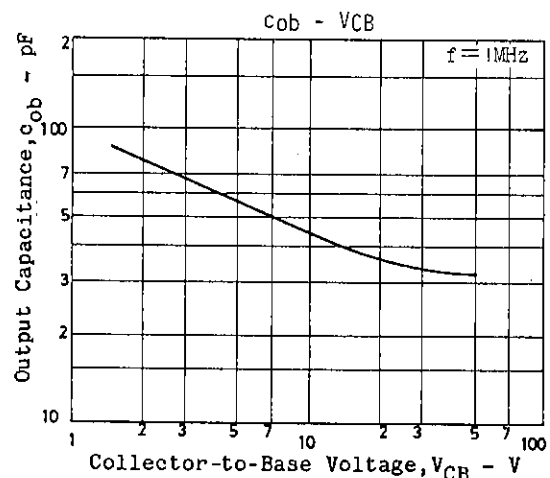
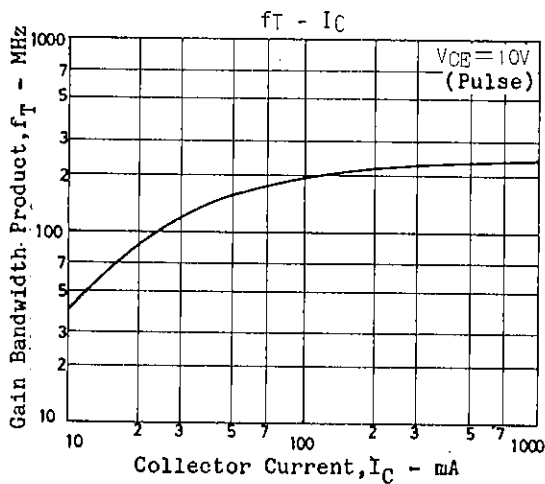
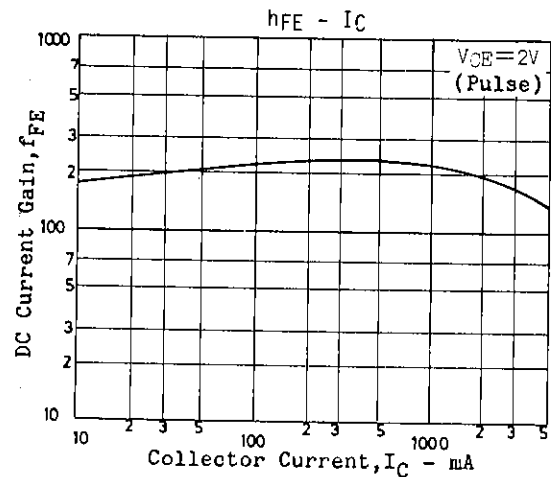
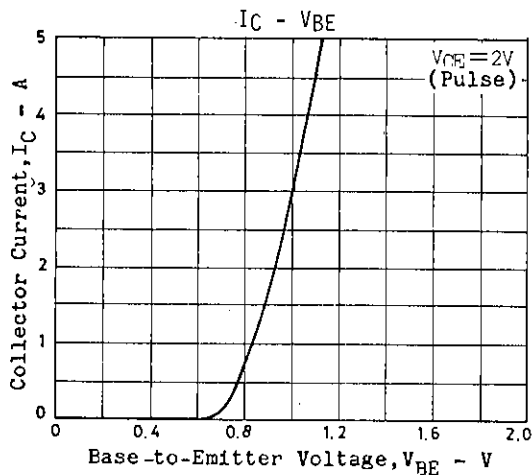
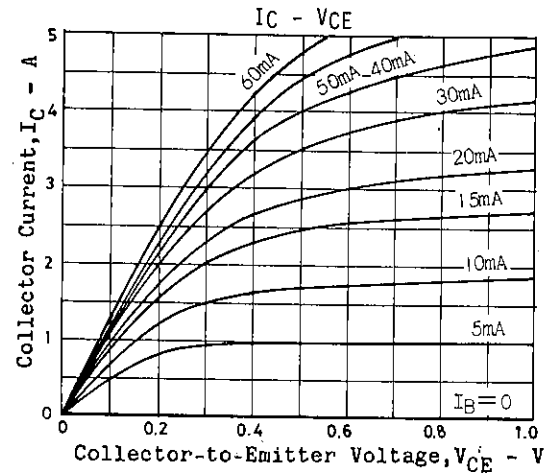
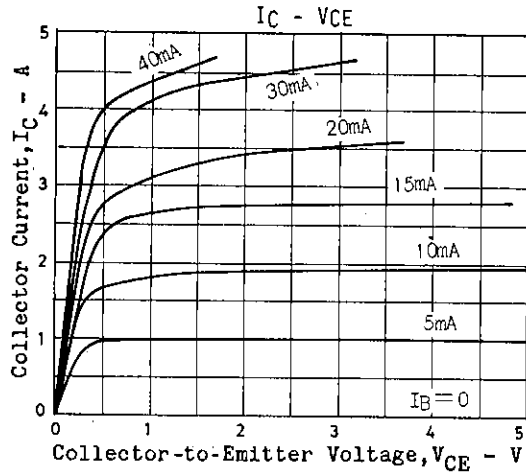
Switching Time Test CircuitUnit (resistance : Ω , capacitance : F)**Package Dimensions 2009A
(unit:mm)**

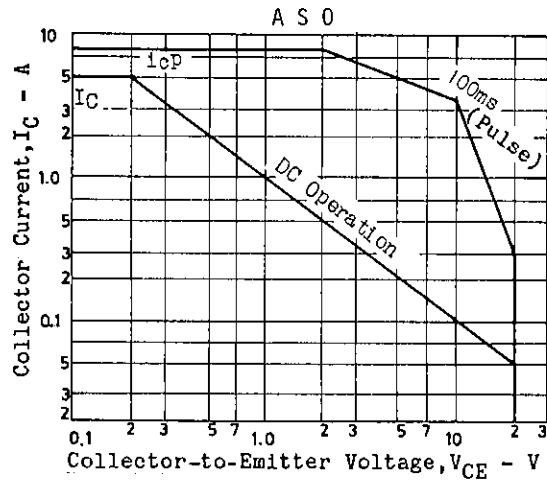
JEDEC: TO-126

B: Base
C: Collector
E: Emitter

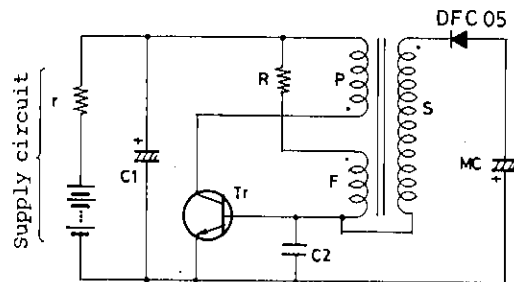
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5277KI/3115KI/5244KI, TS No.538-1/4

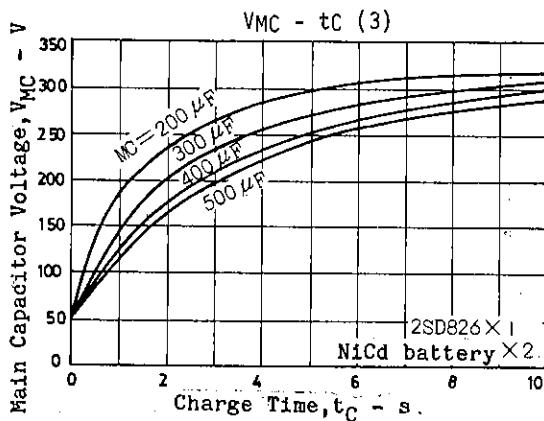
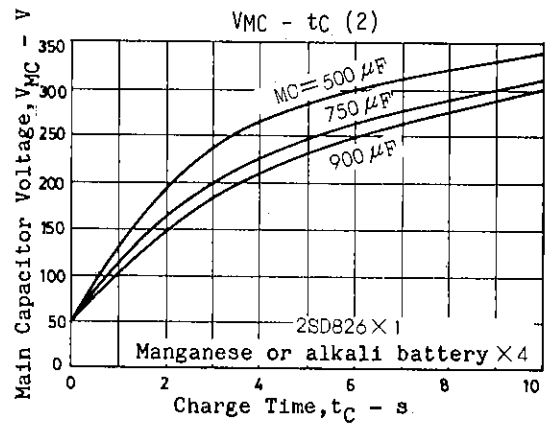
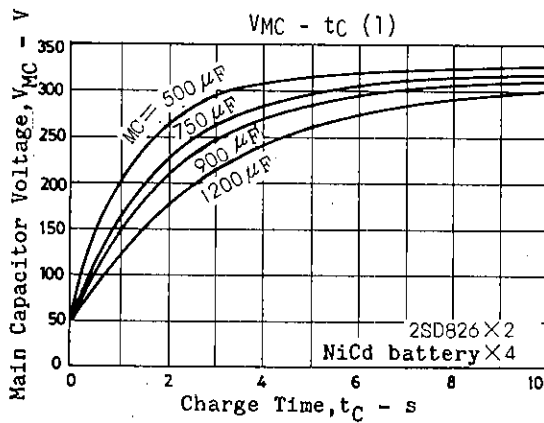




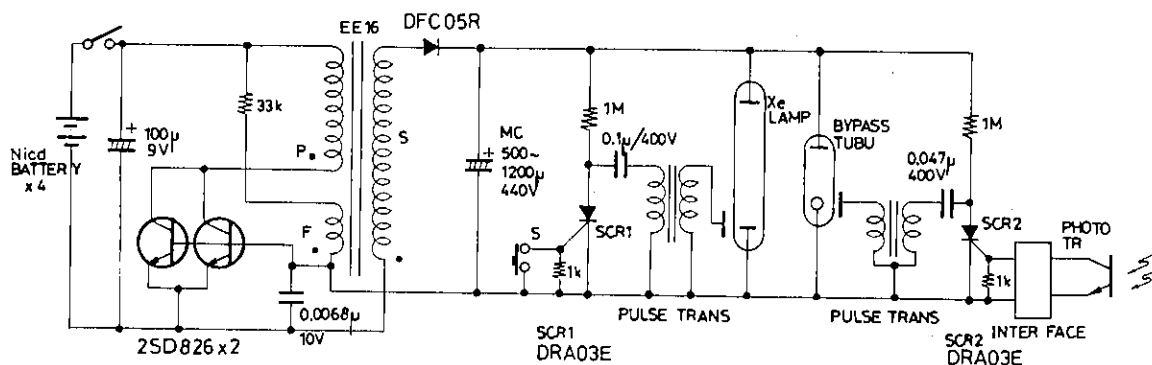
Sample Application Circuit 1 : Electronic flash set



	E[V]	r[Ω]	MC[μF]	C1[μF]	R[kΩ]	C2[μF]	Tr	P	F	S	Core
NiCd ×2	2.7	0.15	~500	100	2.2	0.01	2SD826 FG	0.55 φ × 103/4T	0.23 φ × 123/4T	0.07 φ × 1350T	EE13
Alkali or manganese ×4	6.0	1.2	500 ~900	100	4.7	0.015	2SD826 EFG	0.6 φ × 223/4T	0.23 φ × 203/4T	0.08 φ × 1390T	EE16
NiCd ×4	5.4	0.3	500~ 1200	100	33	0.0068	2SD826 EF×2	“	“	“	“



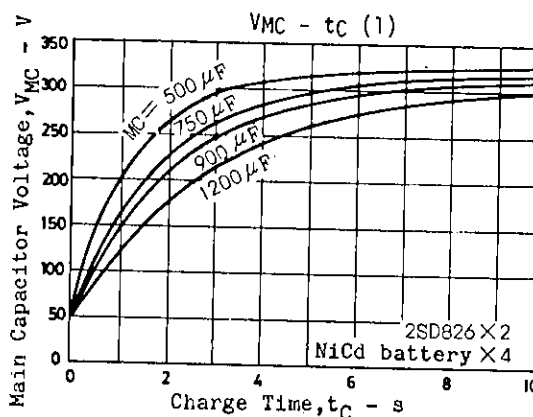
Sample Application Circuit 2 : High-grade electronic flash set



DC/DC CONVERTER TRANS

P: 0.6 ϕ 22 $\frac{3}{4}$ TF: 0.23 ϕ 20 $\frac{3}{4}$ TS: 0.08 ϕ 1390T

CORE: EE16

Unit (resistance : Ω , capacitance : F)

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