

No.538E

2SD826

NPN Epitaxial Planar Type Silicon Transistor

3V, 6V STROBE APPLICATIONS

Features

- . Low saturation voltage.
- . High hFE.
- . Large current capacity.

Absolute Maximum Ratings at Ta=25°C

			unit
Collector-to-Base Voltage	V _{CB0}	60	V
Collector-to-Emitter Voltage	V _{CE0}	20	V
Emitter-to-Base Voltage	V _{EBO}	6	V
Collector Current	I _C	5	A
Peak Collector Current	i _{cp}	100ms, 1 pulse	8 A
Collector Dissipation	P _C	1.0	W
		Tc=25°C	10 W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

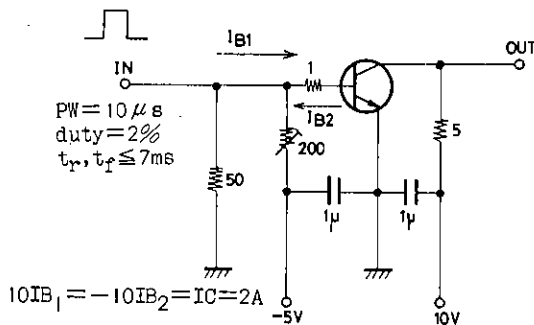
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} =50V, I _E =0			1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			1.0	μA
DC Current Gain	hFE(1)	V _{CE} =2V, I _C =0.5A	120*		560*	
	hFE(2)	V _{CE} =2V, I _C =3A(Pulse)	95			
Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =50mA		120		MHz
Output Capacitance	c _{ob}	V _{CB} =10V, f=1MHz		45		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =3A, I _B =60mA(Pulse)			0.5	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =3A, I _B =60mA(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 hFE as follows:

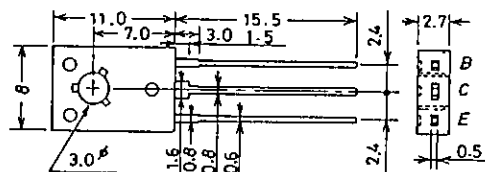
120	E	200	160	F	320	280	G	560
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Switching Time Test Circuit



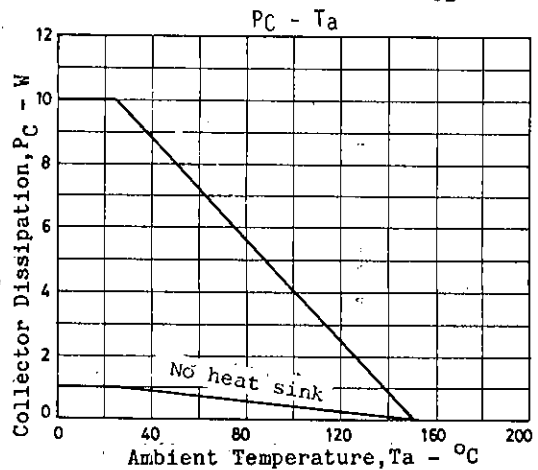
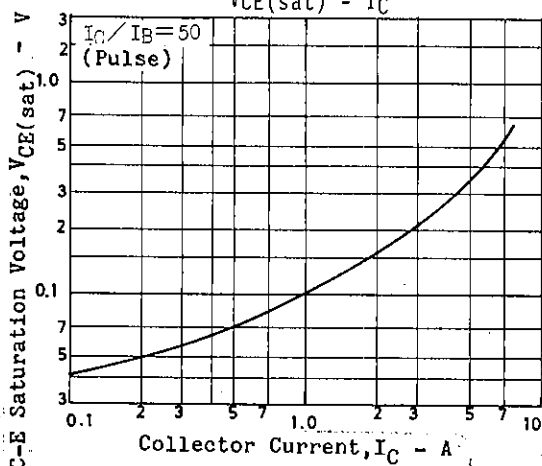
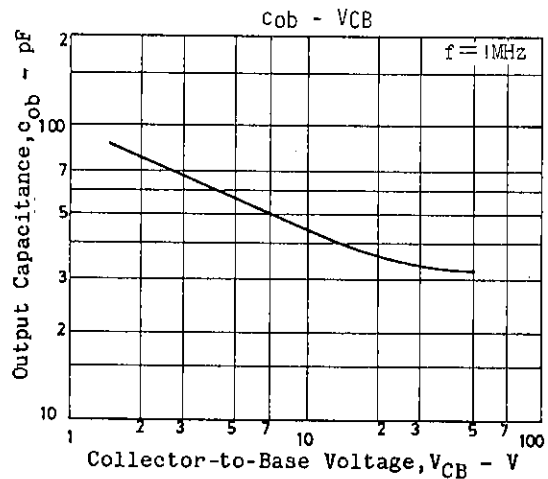
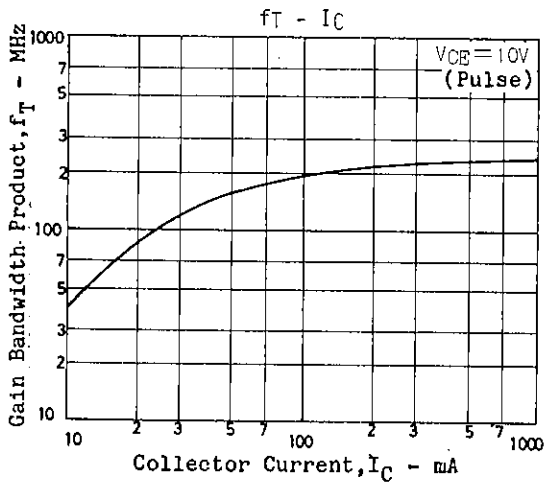
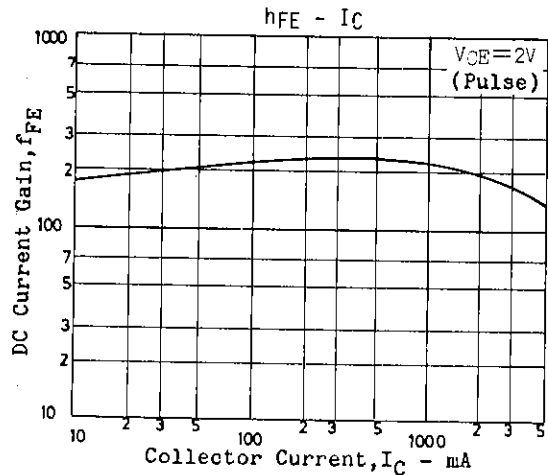
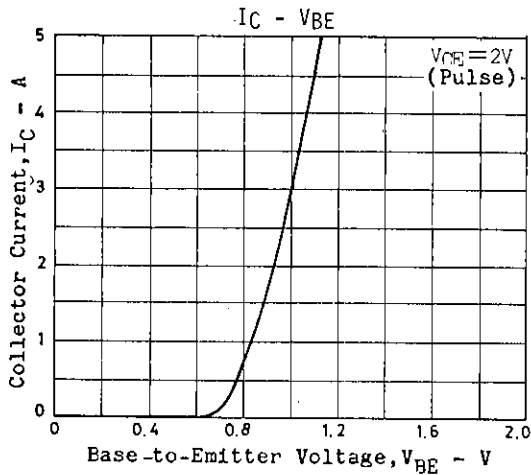
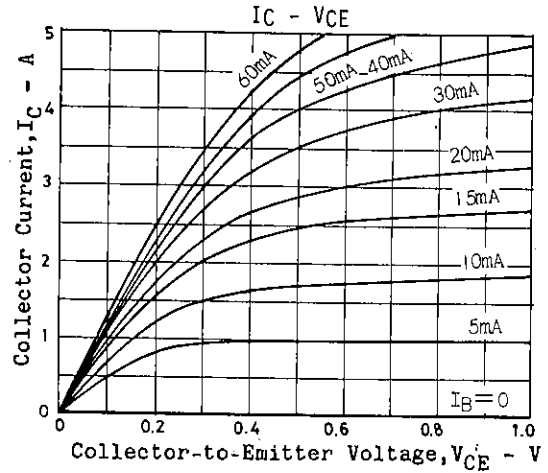
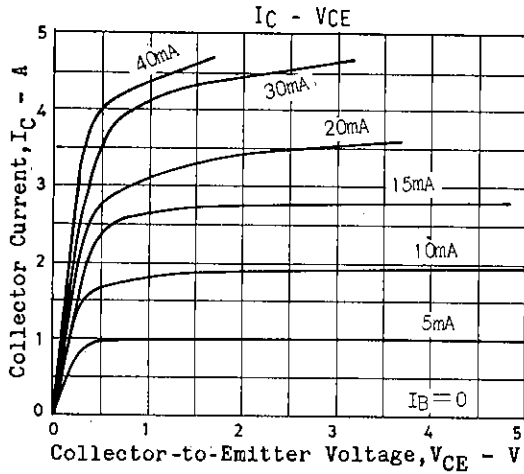
Unit (resistance : Ω, capacitance : F)

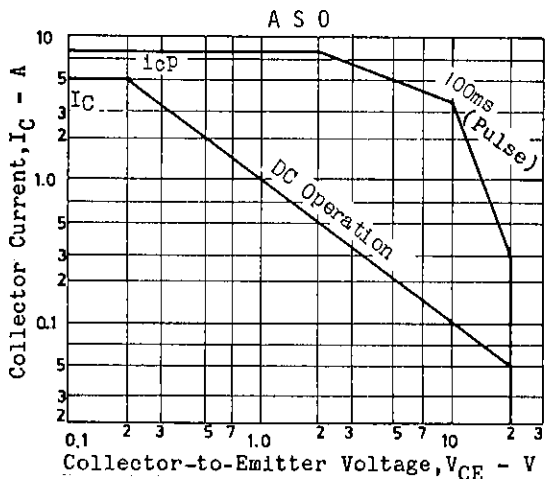
Package Dimensions 2009A
(unit: mm)



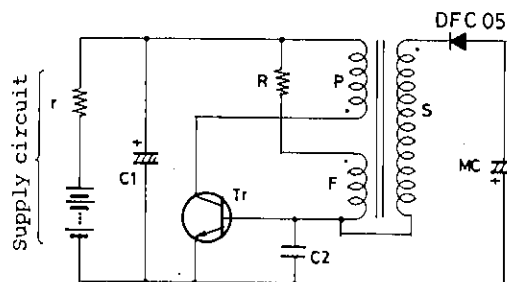
JEDEC: TO-126

B: Base
C: Collector
E: Emitter

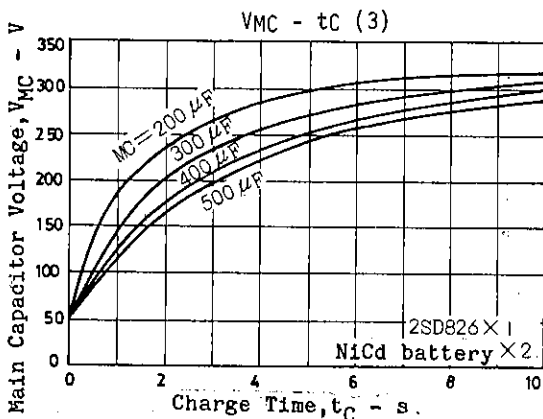
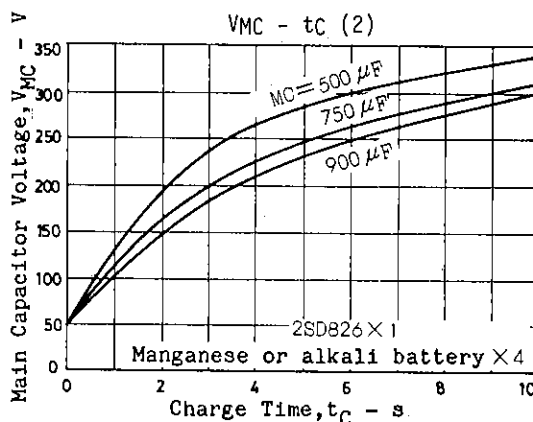
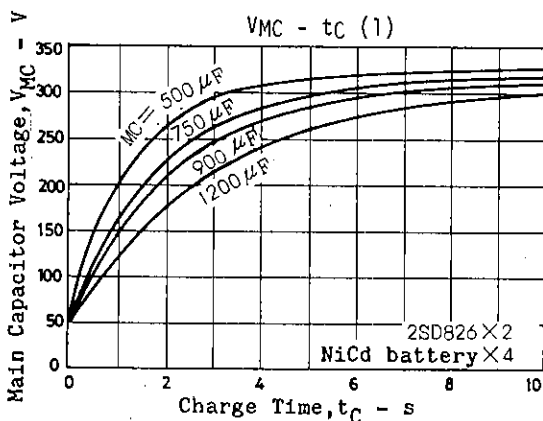




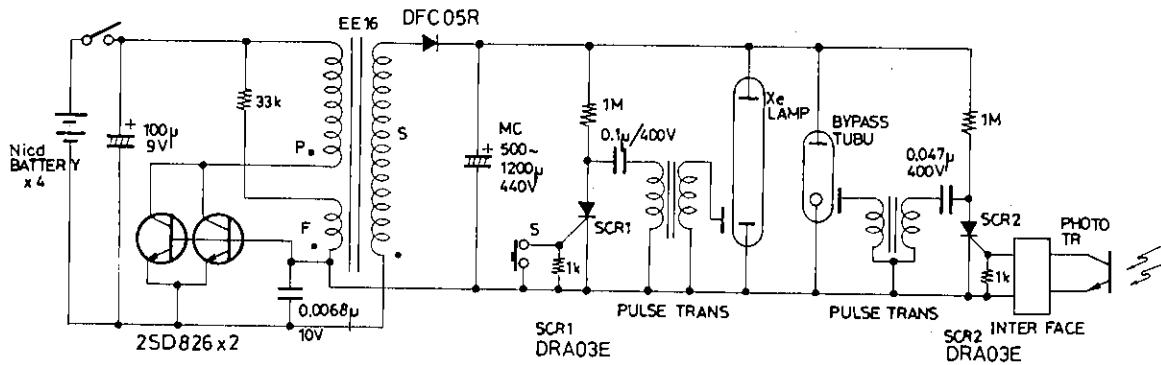
Sample Application Circuit 1 : Electronic flash set



	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 ³ / ₄ T	0.23 φ × 12 ³ / ₄ T	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 × 22 ³ / ₄ T	0.23 φ × 20 ³ / ₄ T	0.08 φ × 1390T	EE16
NiCd × 4	5.4	0.3	500~ 1200	100	33	0.0068	2SD826 EF × 2	"	"	"	"



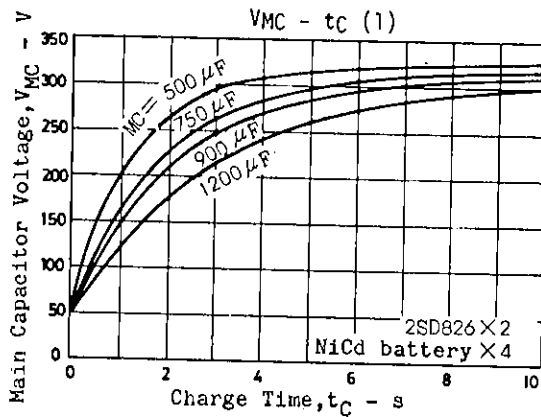
Sample Application Circuit 2 : High-grade electronic flash set



DC/DC CONVERTER TRANS

P: 0.6 ϕ 22 ³/₄T
 F: 0.23 ϕ 20 ³/₄T
 S: 0.08 ϕ 1390T
 CORE: EE16

Unit (resistance : Ω , capacitance : F)



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