

SANYO

No.1221C

2SD1395

NPN Triple Diffused Planar Silicon Darlington Transistor.

Driver Applications**Applications**

- Suitable for use in switching of L load (motor drivers, printer hammer drivers, relay drivers).

Features

- High DC current gain.
- Large current capacity.
- Wide ASO.
- On-chip Zener diode of $60 \pm 10V$ between collector and base.
- Uniformity in collector-to-base breakdown voltage due to adoption of accurate impurity diffusion process.
- High inductive load handling capability.

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

			unit
Collector-to-Base Voltage	V_{CBO}	50※	V
Collector-to-Emitter Voltage	V_{CEO}	50※	V
Emitter-to-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Collector Current (Pulse)	I_{CP}	8	A
Base Current	I_B	0.5	A
Collector Dissipation	P_C	40	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

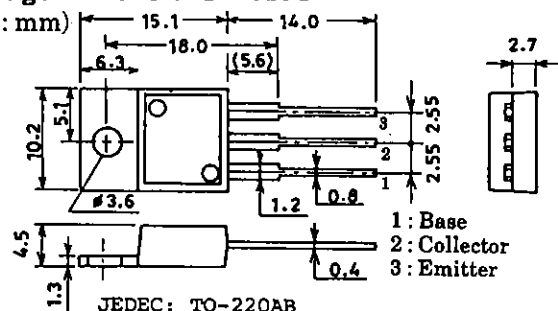
※ : With Zener diode ($60 \pm 10V$)

Electrical Characteristics at $T_a = 25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			3	mA
DC Current Gain	h_{FE}	$V_{CE} = 3V, I_C = 2.5A$	1000	4000		
Gain-Bandwidth Product	f_T	$V_{CE} = 5V, I_C = 2.5A$		20		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5A, I_B = 5mA$		0.9	1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5A, I_B = 5mA$			2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5mA, I_E = 0$	50	60	70	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50mA, R_{BE} = \infty$	50	60	70	V
Inductive Load Handling Capability	E_s/b	$L = 100mH, R_{BE} = 100\Omega$	50			mJ
Rise Time	t_{on}	$V_{CC} = 20V, I_C = 3.0A$		0.6		μs
Storage Time	t_{stg}	$I_{B1} = -I_{B2} = 6mA$		4.0		μs
Fall Time	t_f			1.5		μs

Package Dimensions 2010C

(unit : mm)

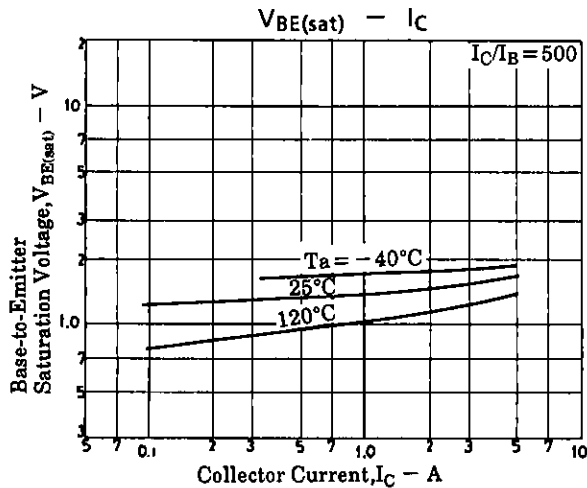
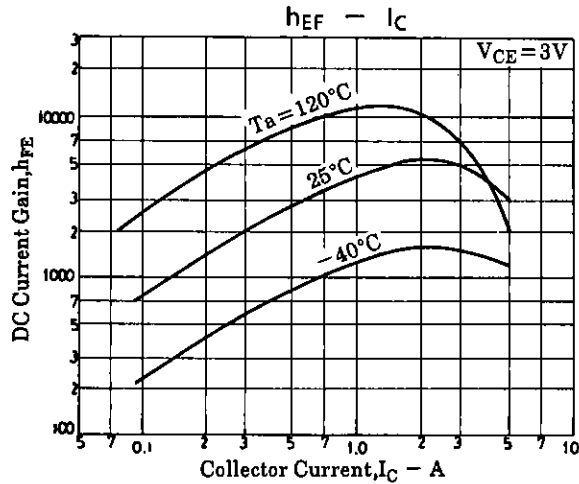
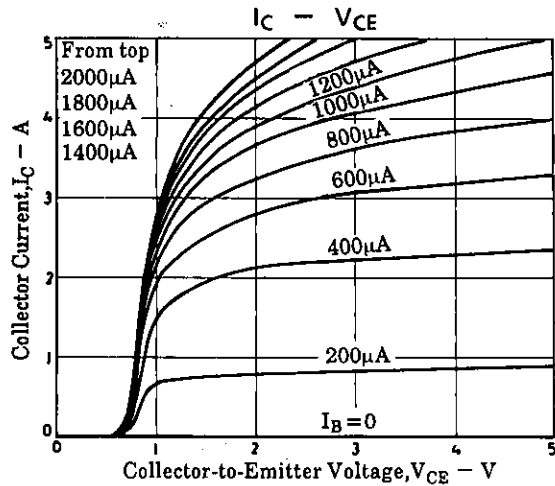
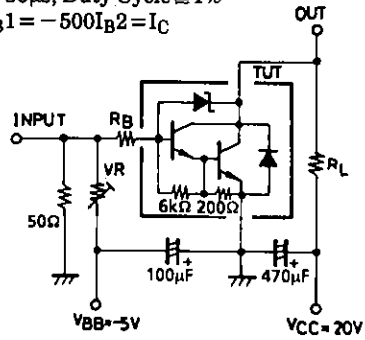
JEDEC : TO-220AB
EIAJ : SC-46**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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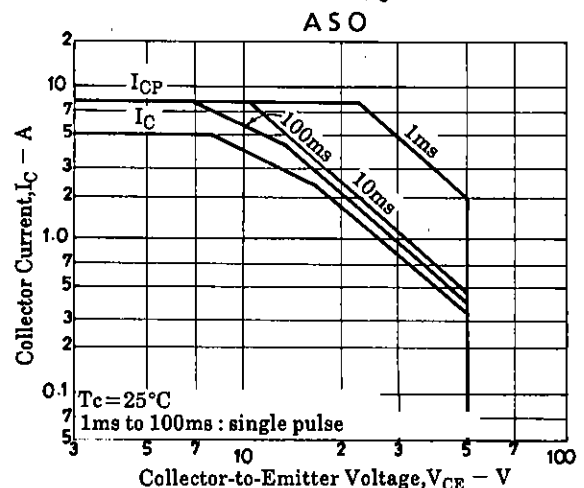
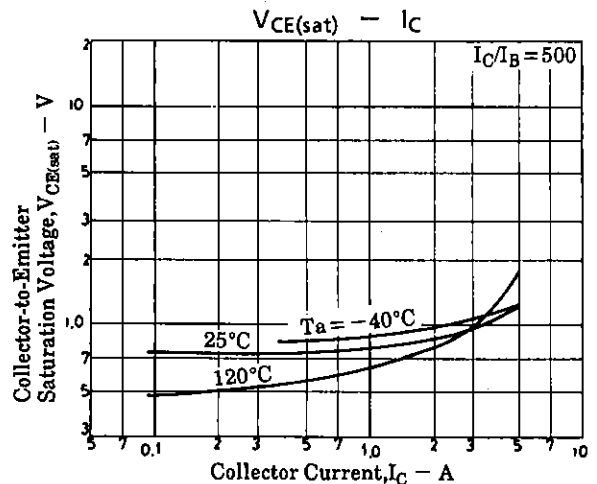
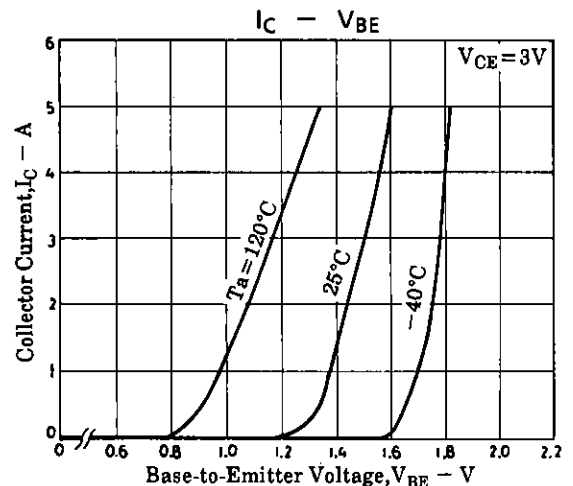
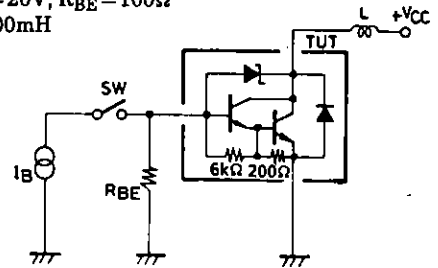
Specified Test Circuit

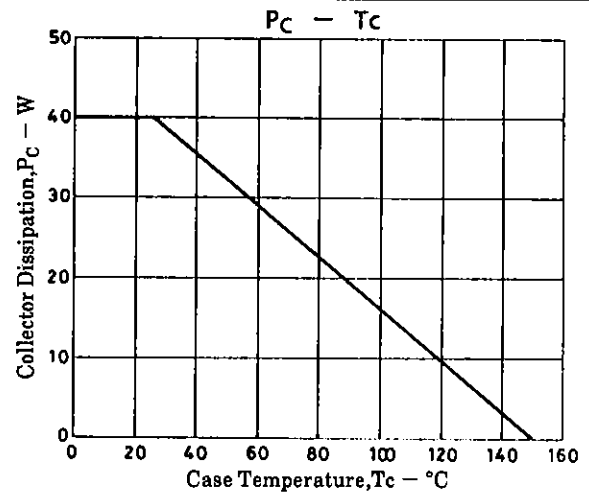
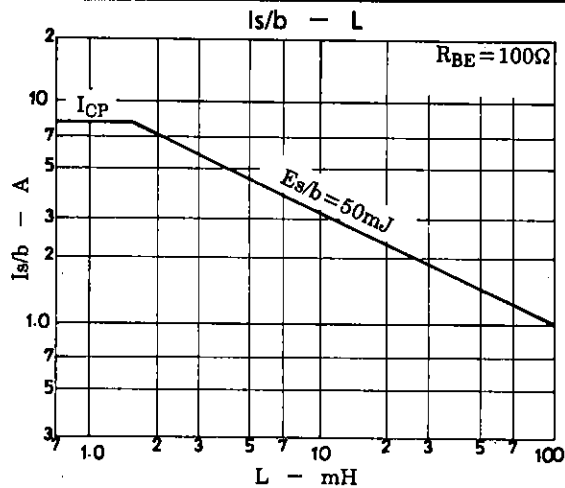
PW = 50 μ s, Duty Cycle $\leq$ 1%
 $500I_{B1} = -500I_{B2} = I_C$



Es/b Test Circuit

$V_{CC} = 20V$, $R_{BE} = 100\Omega$
 $L = 100mH$





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