Ordering number: EN1221C

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±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 Ta=25°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	Tc=25°C	40	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

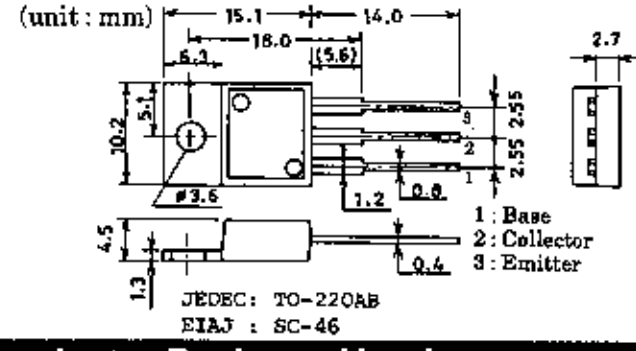
※ : With Zener diode (60±10V)

Electrical Characteristics at Ta=25°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}=∞	50	60	70	V
Inductive Load Handling Capability	Es/b	L=100mH, R_{BE}=100Ω	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)



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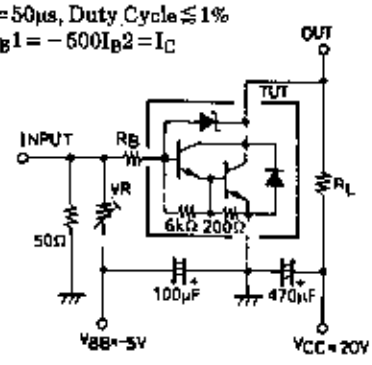
TOKYO OFFICE Tokyo Bldg., 1-10,1-Chome, Ueno, Taito ku, TOKYO, 110 JAPAN

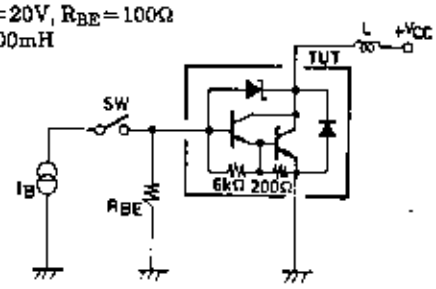
Specified Test Circuit

PW = 50μs, Duty Cycle ≦ 1%
$500I_B1 = -500I_B2 = I_C$

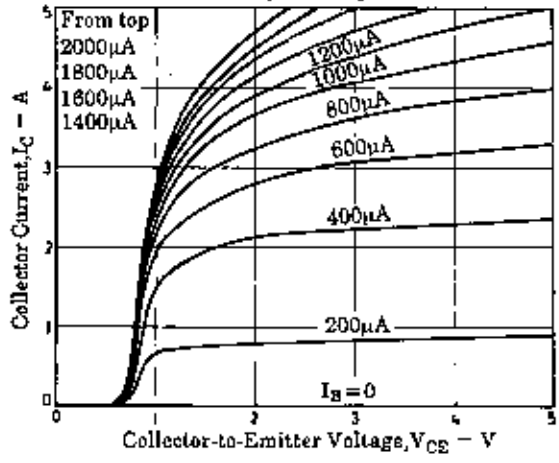


Es/b Test Circuit

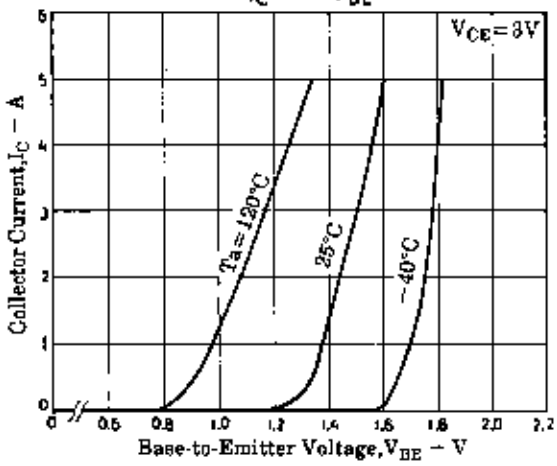
V_{CC} = 20V, R_{BE} = 100Ω
L = 100mH



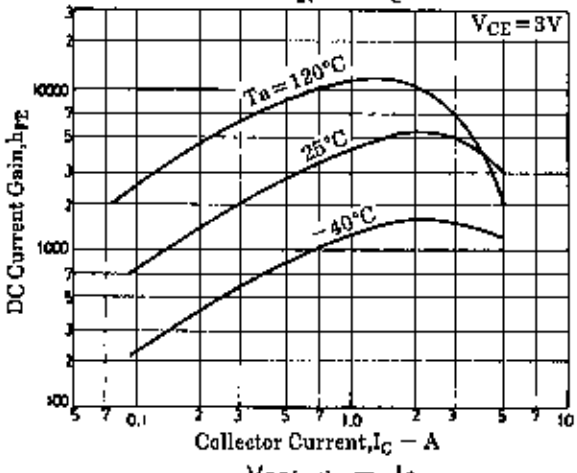
I_C – V_{CE}



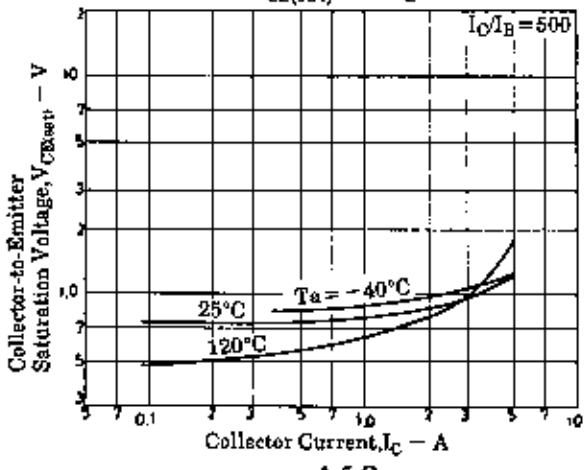
I_C – V_{BE}



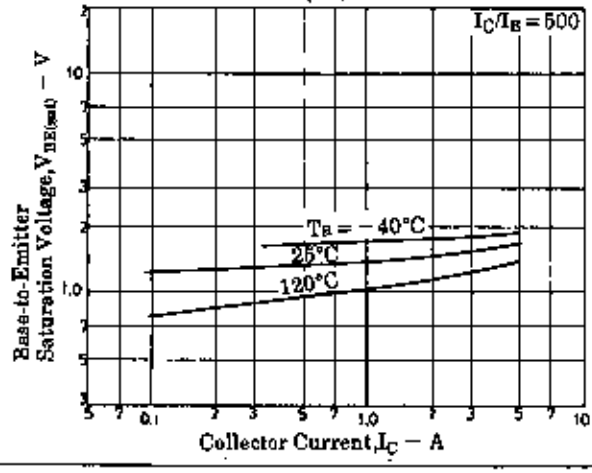
h_{FE} – I_C



$V_{CE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C



ASO