Ordering number: EN 1333C

SANYO

No.1333C

2SC3293

NPN 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 and wide ASO.
- On-chip Zener diode of 60±10V between collector and base.
- Uniformity in collector-to-base breakdown voltage due to the adoption of an 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		2	A
Collector Current (Pulse)	I_{CP}		4	A
Base Current	I_B		0.4	A
Collector Dissipation	P_C	Tc = 25°C	20	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

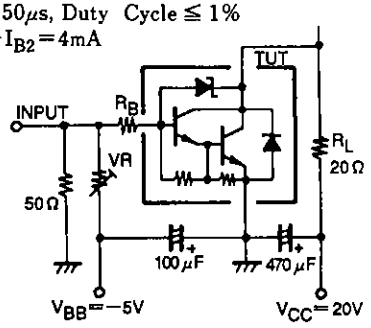
※ : With Zener diode (60±10V)

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0			2	mA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 1A	1000	4000		
Gain-Bandwidth Product	f_T	V_{CE} = 5V, I_C = 1A		180		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C = 1A, I_B = 4mA		1.0	1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C = 1A, I_B = 4mA			2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_E = 0	50	60	70	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	50	60	70	V
Inductive Load Handling Capability	Es/b	L = 100mH, R_{BE} = 100Ω	25			mJ
Turn-ON Time	t_{on}	V_{CC} = 20V, I_C = 1A,		0.2		μs
Storage Time	t_{stg}	I_{B1} = −I_{B2} = 4mA		3.5		μs
Fall Time	t_f			0.5		μs

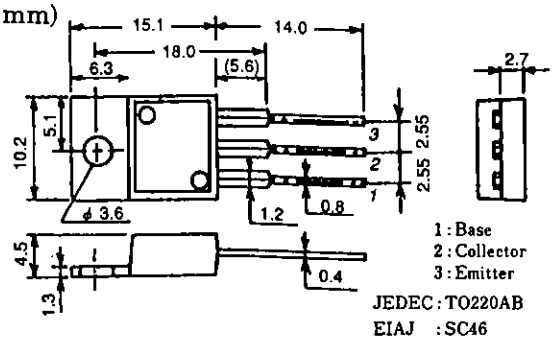
Switching Time Test Circuit

PW = 50μs, Duty Cycle ≦ 1%
I_{B1} = −I_{B2} = 4mA



Package Dimensions 2010C

(unit : mm)



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

Es/b Test Circuit

V_{CC}=20V, R_{BE}=100Ω