Ordering number:EN1312B

NPN Epitaxial Planar Silicon Transistor

2SC3176

CRT Horizontal Deflection Output Applications (with Damper Diode)

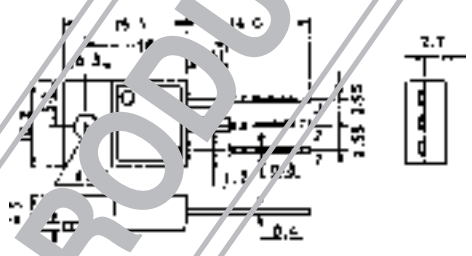
Features

- Fast switching speed.
- Especially suited for use in high-definition CRT display (V_{CC}=12 to 24V).
- Wide ASO.

Package Dimensions

unit:mm

2010C



JEDEC : TO-220AB
EIAJ : SC46

1 : Base
2 : Collector
3 : Emitter

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		400	V
Collector-to-Emitter Voltage	V_{CEO}		200	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		7	A
Collector Current (Pulse)	I_{CP}		12	A
Base Current	I_B		4	A
Collector Dissipation	P_C	Tc=25˚C	50	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=200V, I_E=0			100	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=6V, I_C=0			400	mA
DC Current Gain	h_{FE1}	V_{CE}=1V, I_C=1A	15			
	h_{FE2}	V_{CE}=1V, I_C=5A	8		40	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=0.5A	10	40		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=5A, I_B=0.65A			1	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=5A, I_B=0.65A			1.3	V

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=1mA, I_E=0	400			V
Diode Forward Voltage	V_F	I_F=5A			1.5	V
Fall Time	t_f	I_C=5A, I_{B1}=–I_{B2}=0.625A			0.5	µs

Switching Time Test Circuit