

**SANYO**

No.1252C

**2SC3184**

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

**Features**

- High breakdown voltage ( $V_{CBO} \geq 900V$ ).
- Fast switching speed.
- Wide ASO.

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

			unit
Collector-to-Base Voltage	$V_{CBO}$	900	V
Collector-to-Emitter Voltage	$V_{CEO}$	800	V
Emitter-to-Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	0.5	A
Collector Current (Pulse)	$I_{CP}$	$PW \leq 300\mu s, \text{duty cycle} \leq 10\%$	A
Collector Dissipation	$P_C$	30	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

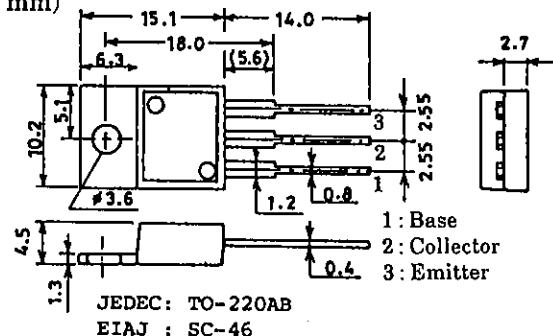
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 800V, I_E = 0$			10	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			10	$\mu A$
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5V, I_C = 60mA$	10※		40※	
	$h_{FE}(2)$	$V_{CE} = 5V, I_C = 300mA$	8			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 300mA, I_B = 60mA$			2	V
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 60mA$		15		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, f = 1MHz$		20		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	900			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	800			V
C-E Sustain Time	$V_{CEO(sus)}$	$I_C = 0.5A, I_B = 0.1A, L = 5mH$	800			V
	$V_{CEX(sus)}$	$I_C = 0.5A, I_{B1} = 0.1A, I_{B2} = -0.1A$ $L = 5mH, \text{clamped}$	900			V
Turn-ON Time	$t_{on}$	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			1.0	$\mu s$
Storage Time	$t_{stg}$	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			3.0	$\mu s$
Fall Time	$t_f$	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			1.0	$\mu s$

※ : For the  $h_{FE}(1)$  of the 2SC3184, specify two ranks or more in principle.

10	K	20	15	L	30
20	M	40			

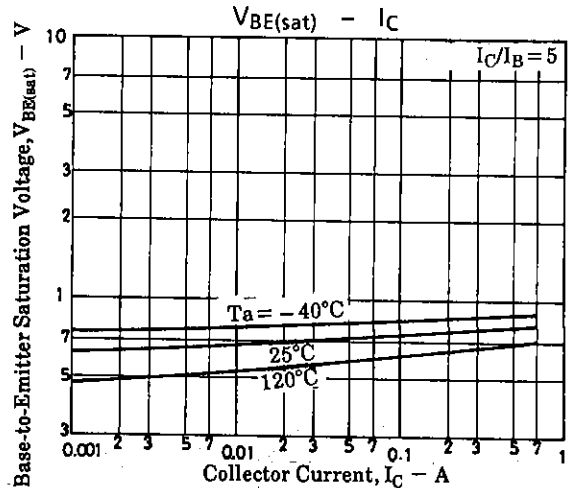
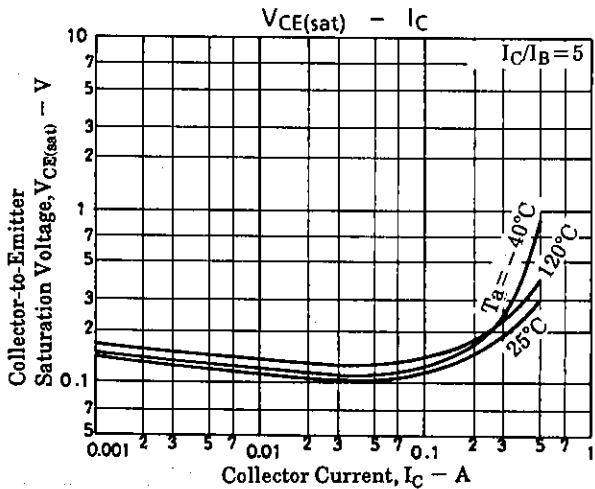
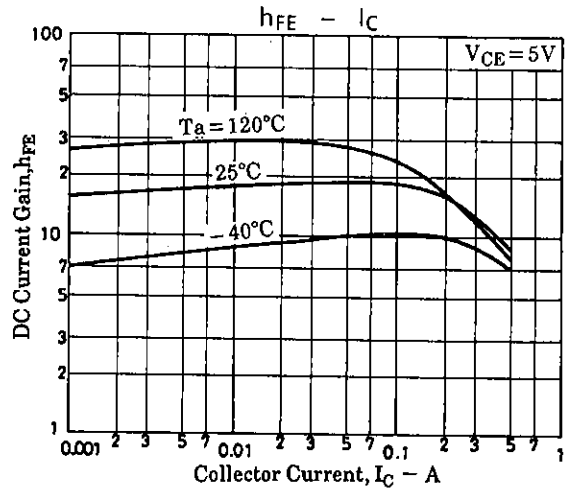
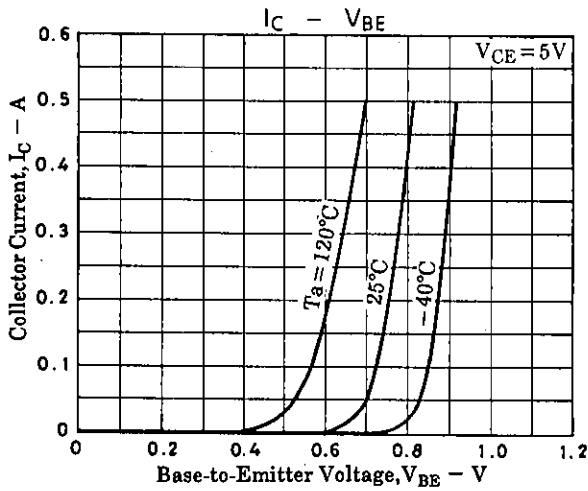
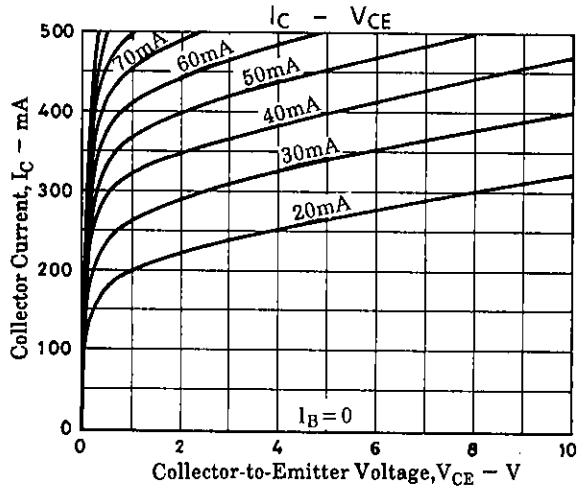
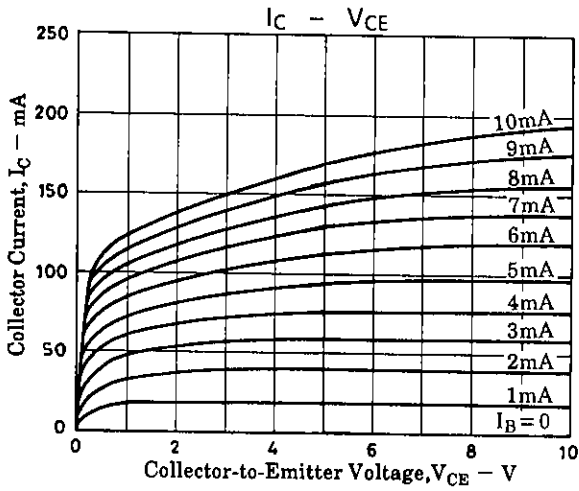
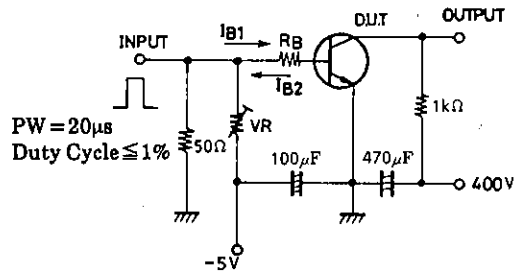
**Package Dimensions 2010C**

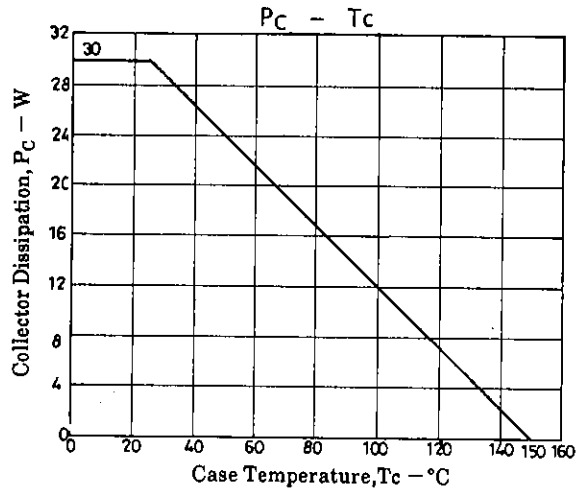
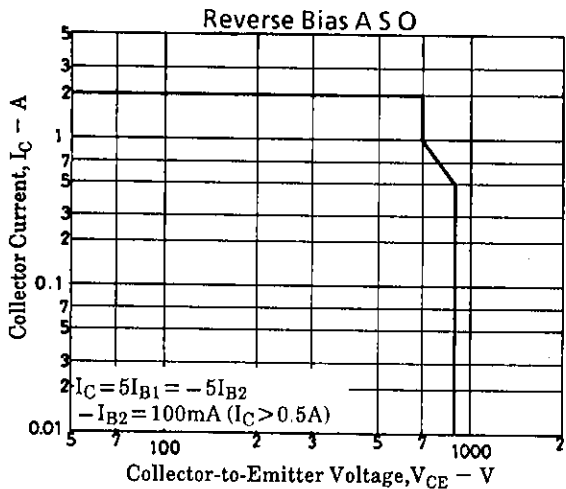
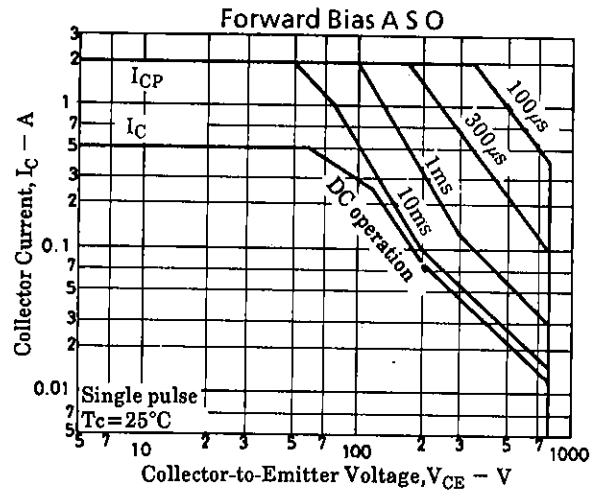
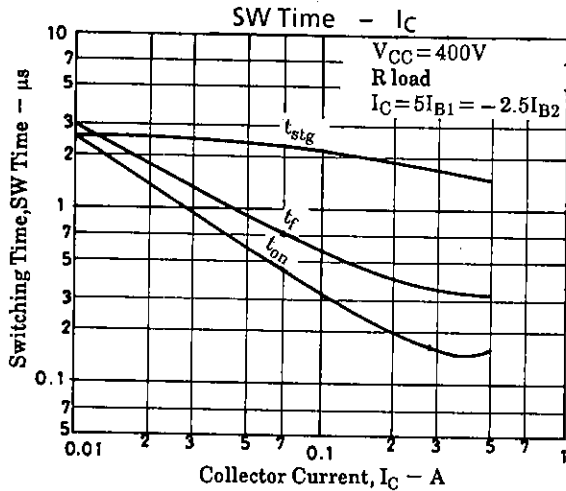
(unit : mm)

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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

Switching Time Test Circuit





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