

**SANYO**

No.3331

**2SC4460**

NPN Triple Diffused Planar Silicon Transistor

## Switching Regulator Applications

## Features

- High breakdown voltage, high reliability
- Fast switching speed
- Wide ASO
- Adoption of MBIT process
- Micaless package facilitating mounting

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

bsolute Maximum Ratings at Ta= 25°C				unit
Collector-to-Base Voltage	V <sub>CBO</sub>		800	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		500	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		7	V
Collector Current	I <sub>C</sub>		15	A
Peak Collector Current	i <sub>cp</sub>	PW≤ 300μs,duty cycle≤ 10%	25	A
Base Current	I <sub>B</sub>		4	A
Collector Dissipation	P <sub>C</sub>		3	W
		T <sub>c</sub> = 25°C	55	W
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		- 55 to + 150	°C

Electrical Characteristics at  $T_a = 25^\circ\text{C}$ 

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 500\text{V}, I_E = 0$			10	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$			10	$\mu\text{A}$
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}, I_C = 1.2\text{A}$	15※		50※	
	$h_{FE(2)}$	$V_{CE} = 5\text{V}, I_C = 6\text{A}$	8			
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 1.2\text{A}$		18		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		160		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 6\text{A}, I_B = 1.2\text{A}$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 6\text{A}, I_B = 1.2\text{A}$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	800			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	500			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 5\text{A}, I_{B1} = -I_{B2} = 2\text{A},$ $L = 500\mu\text{H}, \text{clamped}$	500			V

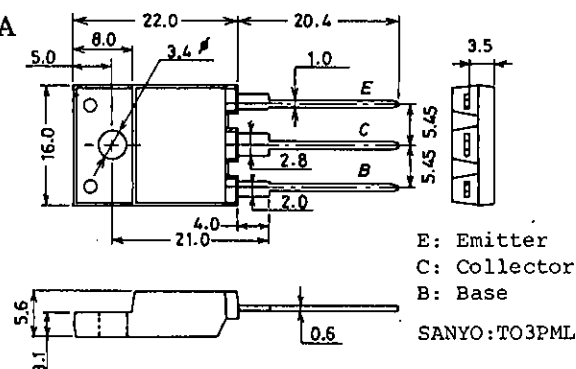
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※ : For the  $h_{FE(1)}$  of the 2SC4460, specify two ranks or more in principle.

15 L 30	20 M 40	30 N 50
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## Package Dimensions 2039A

(unit : mm)



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7190MH, TA(KOTO) No.3331-1/3

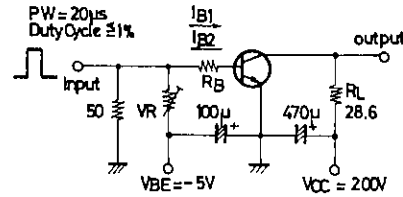
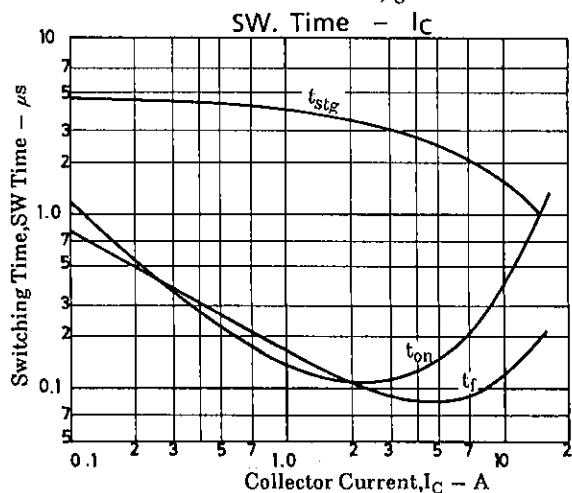
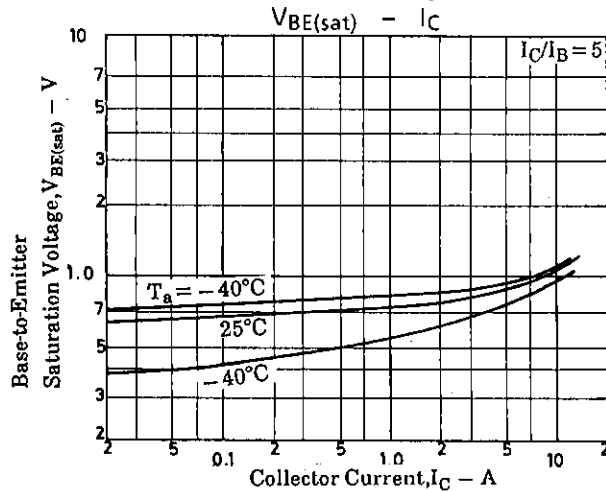
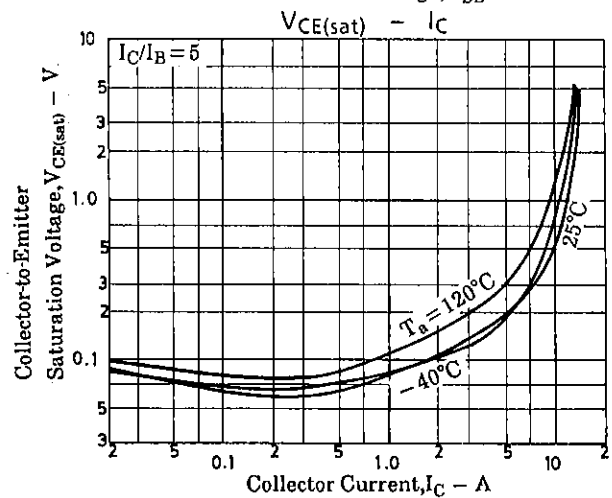
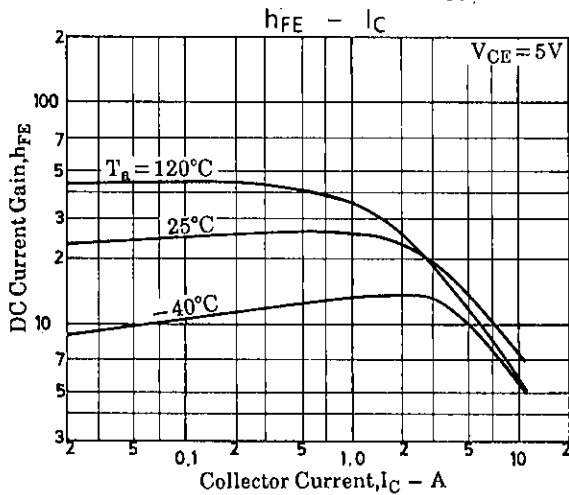
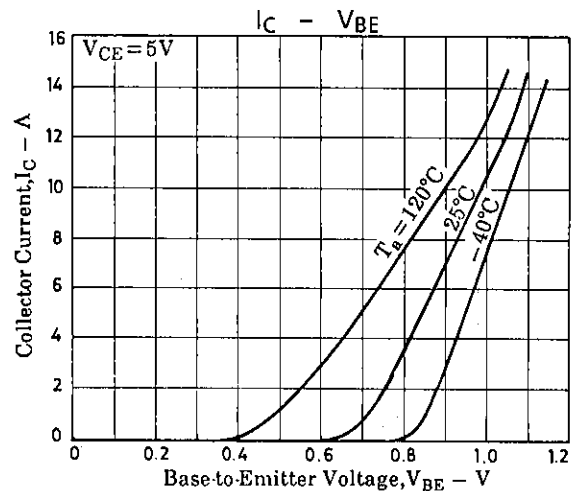
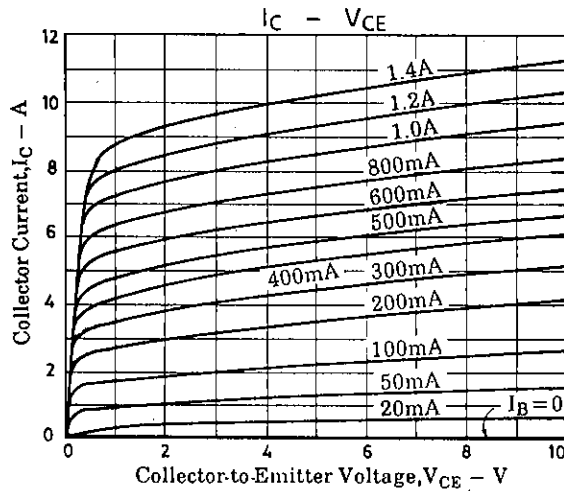
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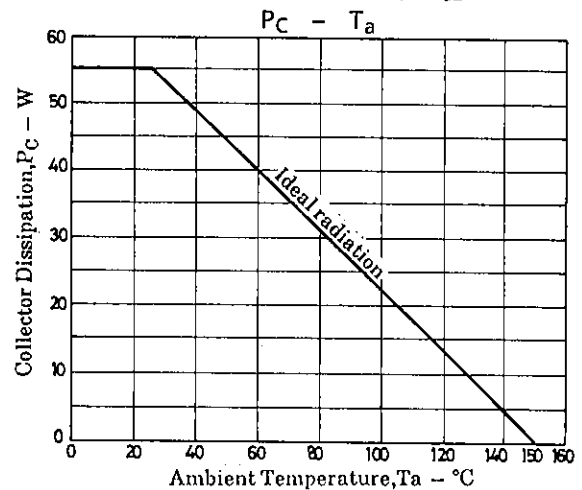
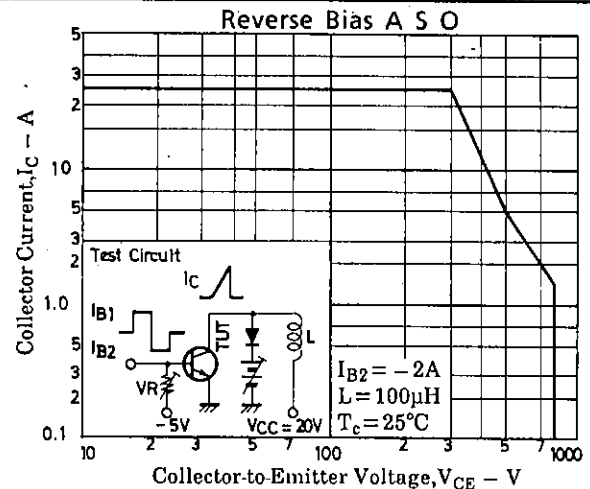
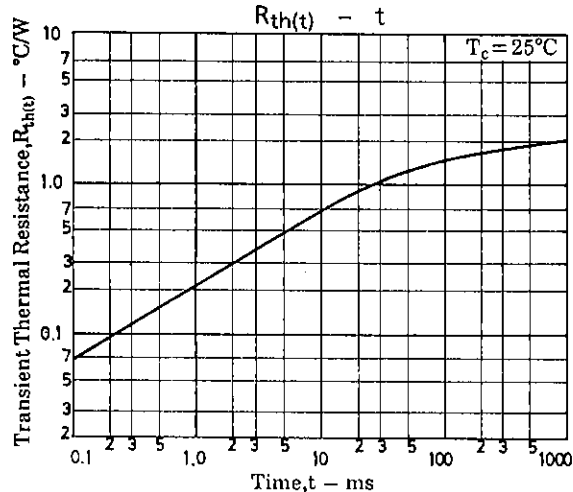
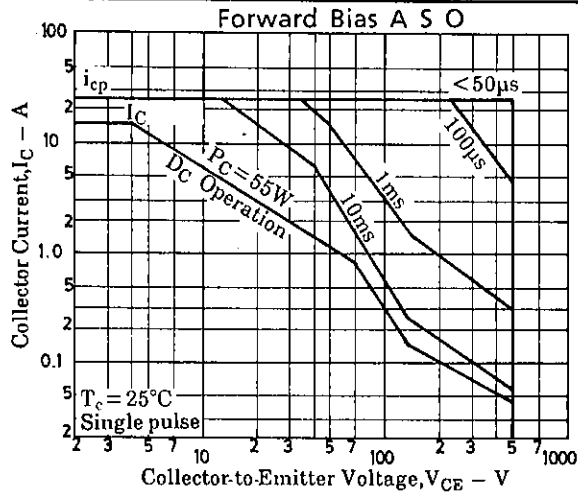
Turn-ON time  
Storage Time  
Fall Time

$$\begin{matrix} t_{on} \\ t_{stg} \\ t_f \end{matrix} \quad \left\{ \begin{array}{l} V_{CC} = 200V, \\ 5I_{B1} = -2.5I_{B2} = I_C = 7A, \\ R_L = 28.6\Omega \end{array} \right.$$

min	typ	max	unit
		0.5	$\mu s$
		3.0	$\mu s$
		0.3	$\mu s$

## Switching Time Test Circuit

Unit (resistance:  $\Omega$ , capacitance: F)



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