

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 $T_a = 25^\circ\text{C}$

Absolute Maximum Ratings at Ta = 25°C				unit
Collector-to-Base Voltage	V _{CBO}		800	V
Collector-to-Emitter Voltage	V _{CEO}		500	V
Emitter-to-Base Voltage	V _{EBO}		7	V
Collector Current	I _C		15	A
Peak Collector Current	i _{cp}	PW ≤ 300 μs, duty cycle ≤ 10%	25	A
Base Current	I _B		4	A
Collector Dissipation	P _C		3	W
		T _c = 25°C	55	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		- 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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
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

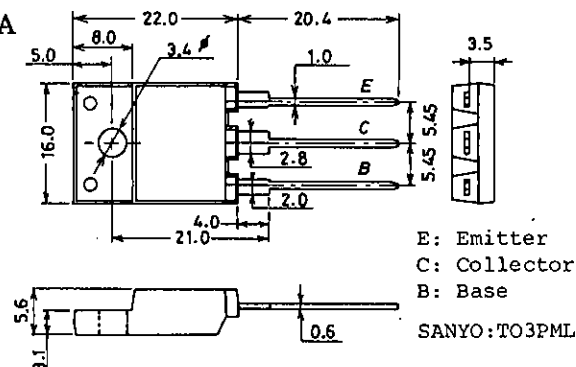
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※ : For the $h_{FE(1)}$ of the 2SC4460, specify two ranks or more in principle.

15 L 30 20 M 40 30 N 50

Package Dimensions 2039A

(unit : mm)



E: Emitter
C: Collector
B: Base

SANYO:TO3PML

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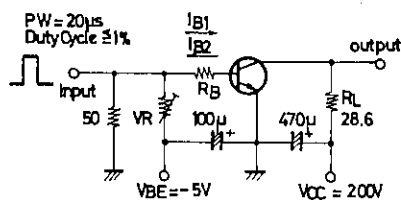
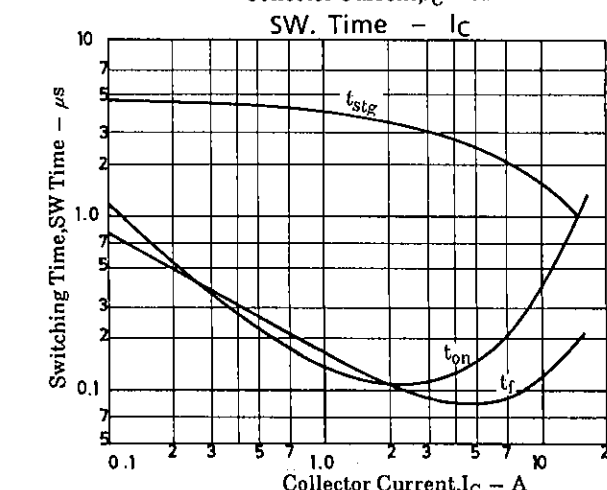
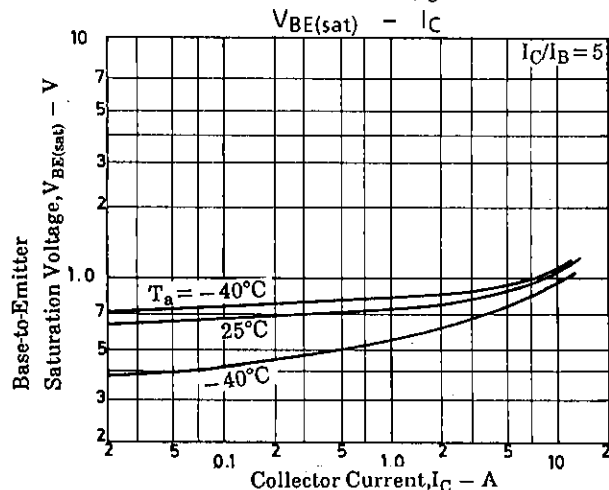
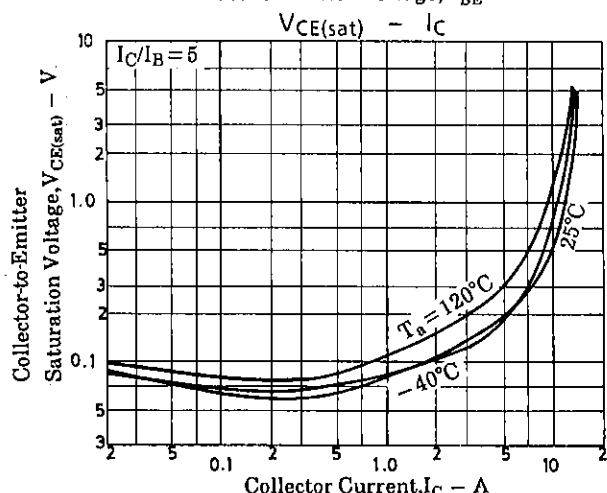
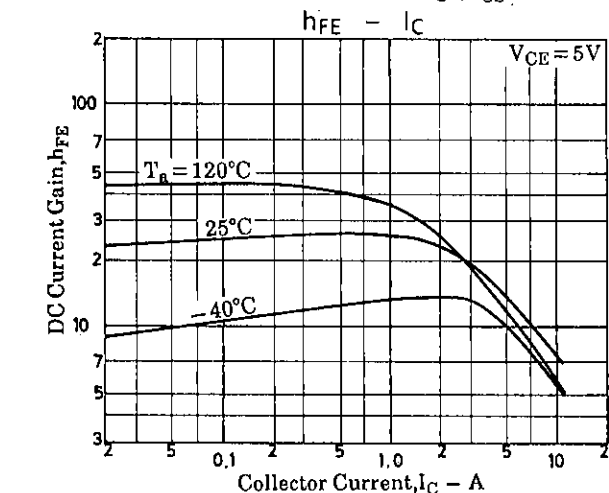
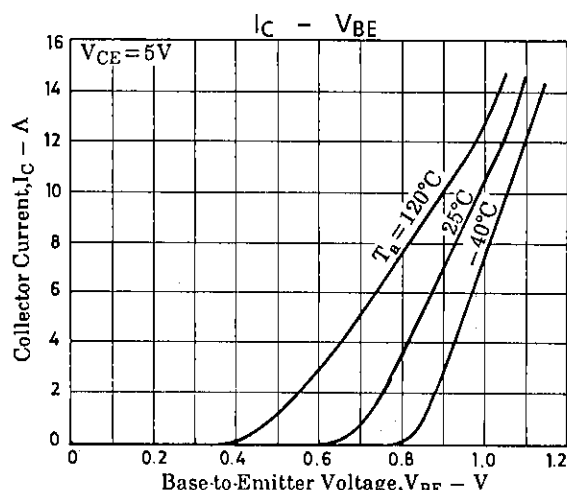
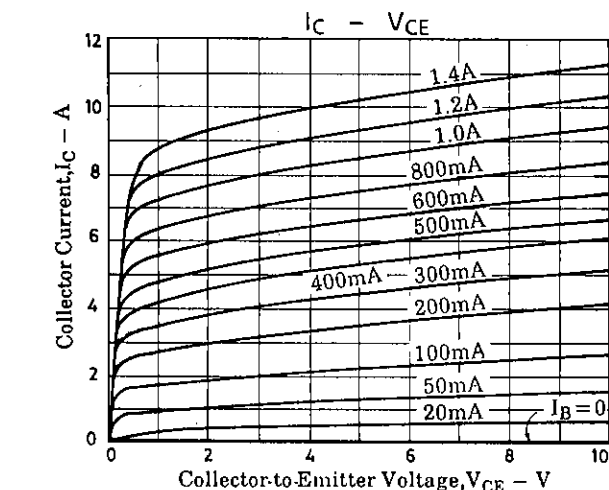
Turn-ON time
Storage Time
Fall Time

t_{on}
 t_{stg}
 t_f

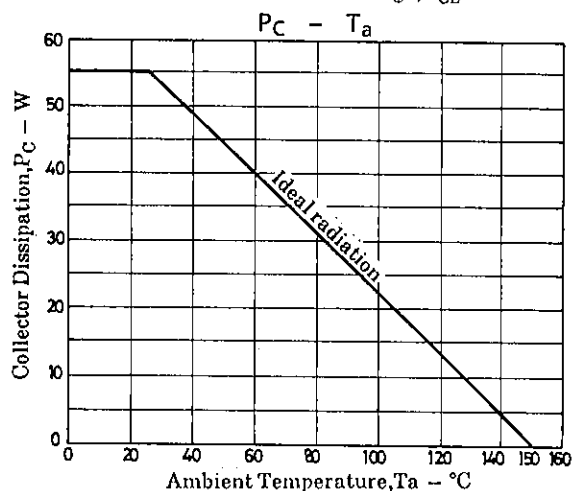
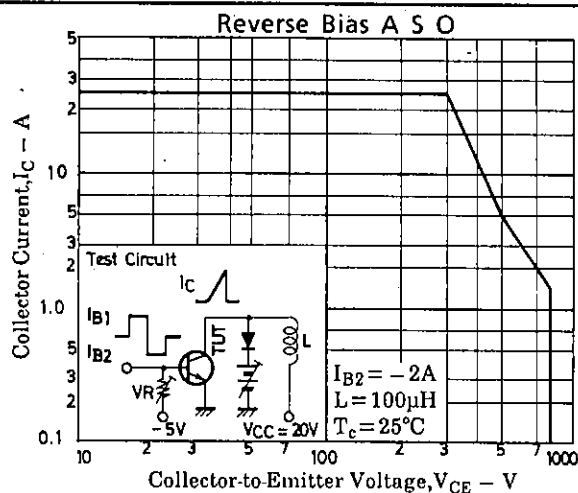
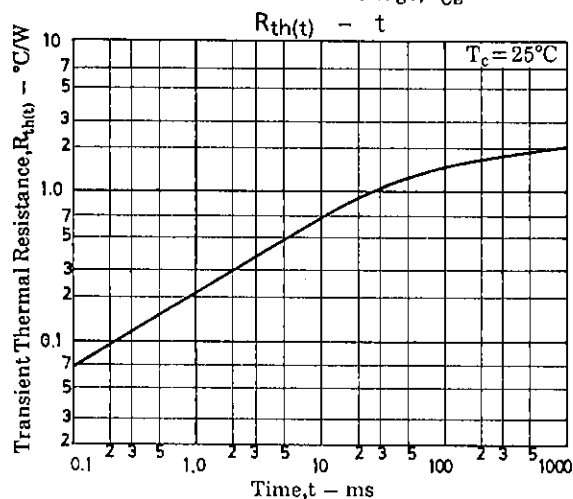
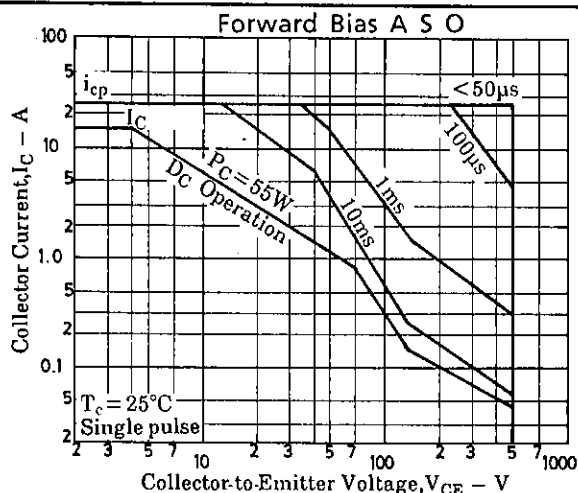
$V_{CC}=200V$,
 $5I_{B1} = -2.5I_{B2} = I_C = 7A$,
 $R_L = 28.6\Omega$

min	typ	max	unit
		0.5	μs
		3.0	μs
		0.3	μs

Switching Time Test Circuit

Unit (resistance: Ω , capacitance: F)

2SC4460



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