Ordering number: EN 3331

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 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≦300μs, duty cycle≦10%	25	A
Base Current	I_B		4	A
Collector Dissipation	P_C		3	W
		Tc = 25°C	55	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

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

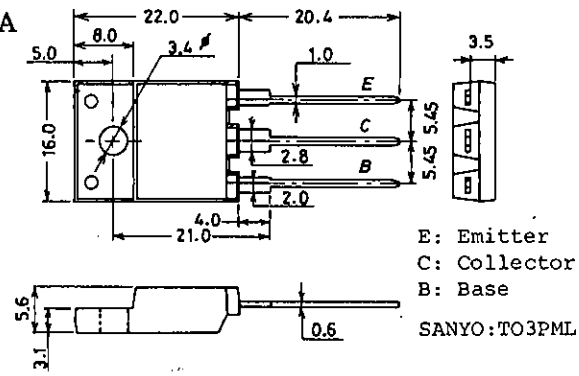
Continued on next page.

※ : 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)

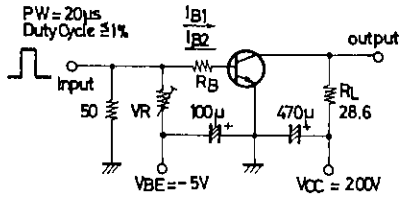


SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

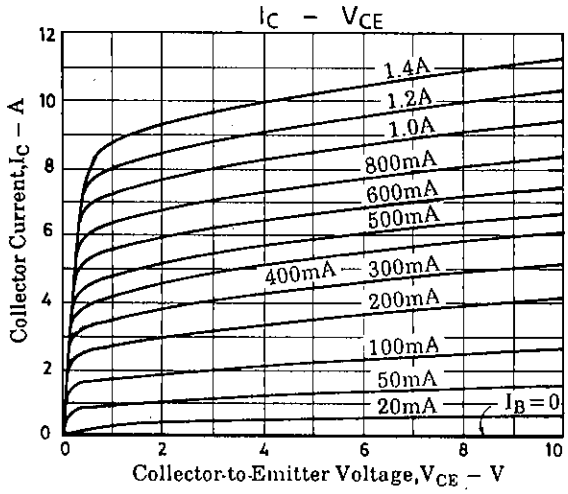
Continued from preceding page.

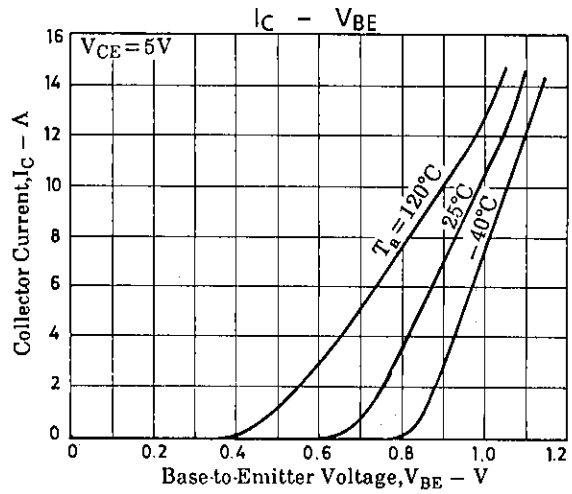
			min	typ	max	unit
Turn-ON time	t_{on}	$V_{CC}=200V$,			0.5	μs
Storage Time	t_{stg}	$5I_{B1}=-2.5I_{B2}=I_C=7A$,			3.0	μs
Fall Time	t_f	$R_L=28.6\Omega$			0.3	μs

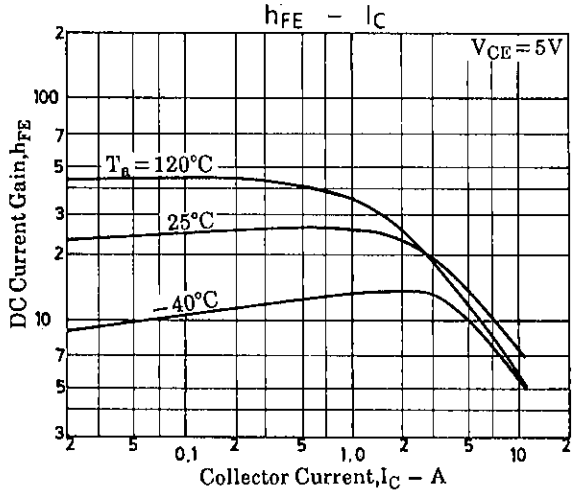
Switching Time Test Circuit

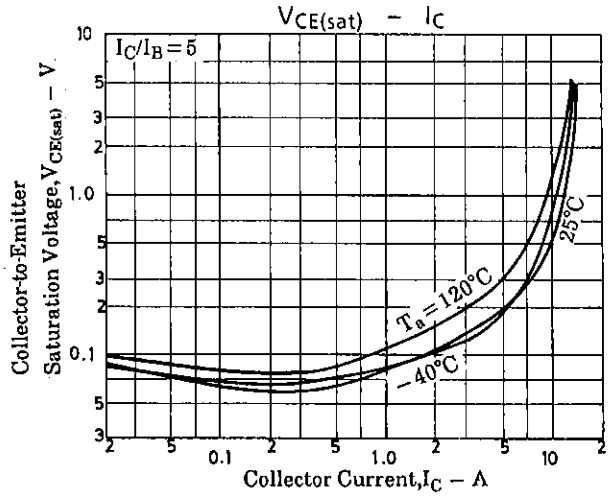


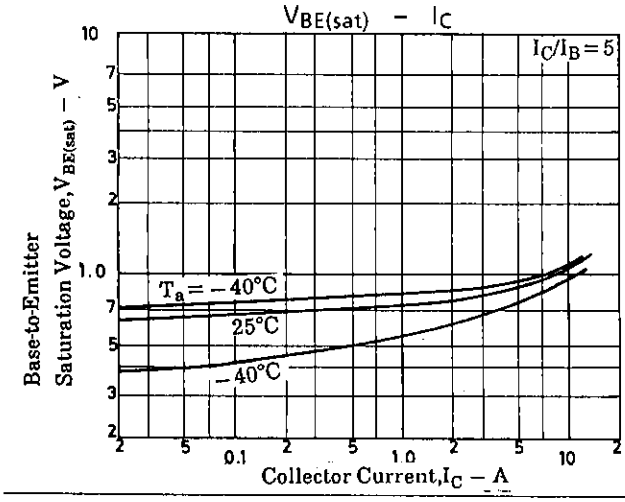
Unit (resistance: Ω, capacitance: F)

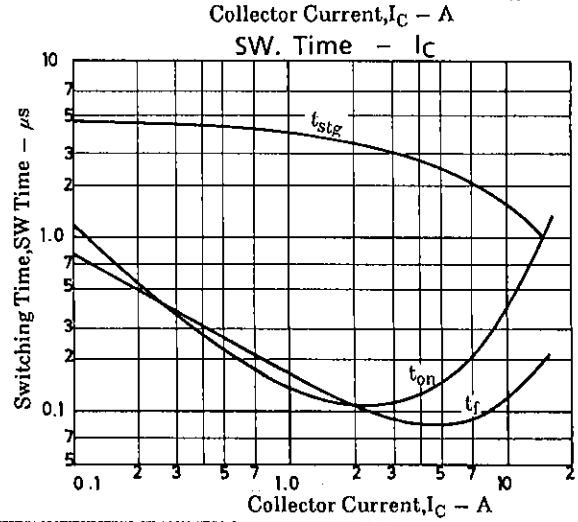












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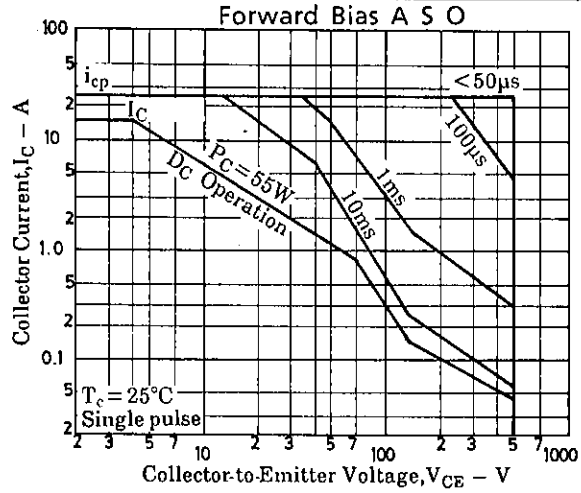
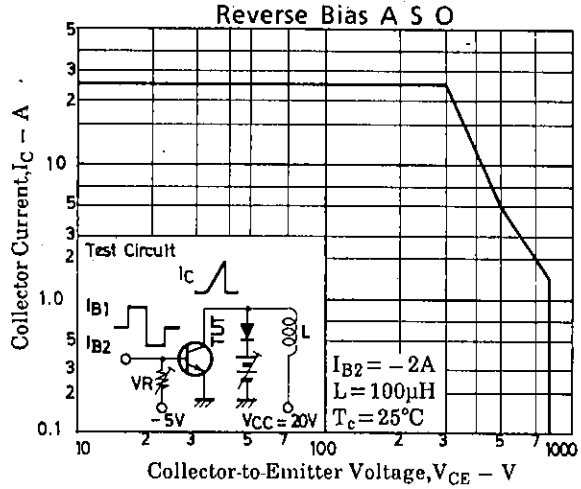
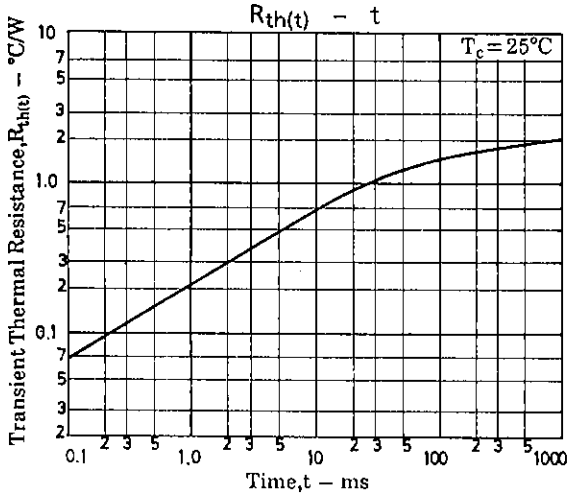
Forward Bias A S O



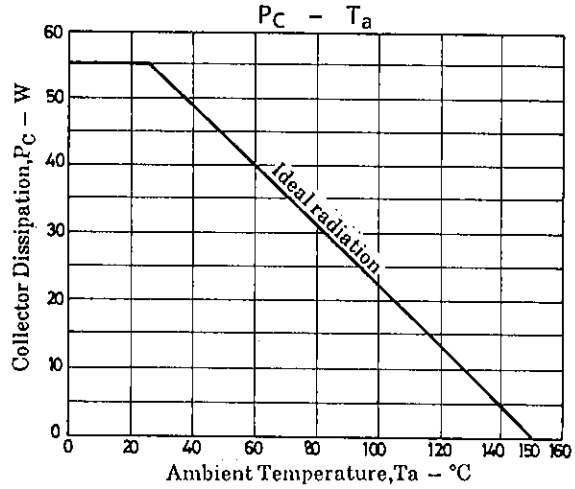
Reverse Bias A S O



$R_{th(t)}$ – t



P_C – T_a



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