

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

Collector-to-Base Voltage	V_{CB0}		800	V	
Collector-to-Emitter Voltage	V_{CE0}		500	V	
Emitter-to-Base Voltage	V_{EB0}		7	V	
Collector Current	I_C		15	A	
Peak Collector Current	i_{cp}	$PW \leq 300\mu s, \text{duty cycle} \leq 10\%$	25	A	
Base Current	I_B		4	A	
Collector Dissipation	P_C		3	W	
		$T_c = 25^\circ C$	55	W	
Junction Temperature	T_j		150	°C	
Storage Temperature	T_{stg}		-55 to +150	°C	

Electrical Characteristics at Ta = 25°C

			min	typ	max	
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	$V_{(BR)CEO}$	$I_C = 5mA, R_{BE} = \infty$	500			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 5A, I_{B1} = -I_{B2} = 2A,$ $L = 500\mu H, \text{clamped}$	500			V

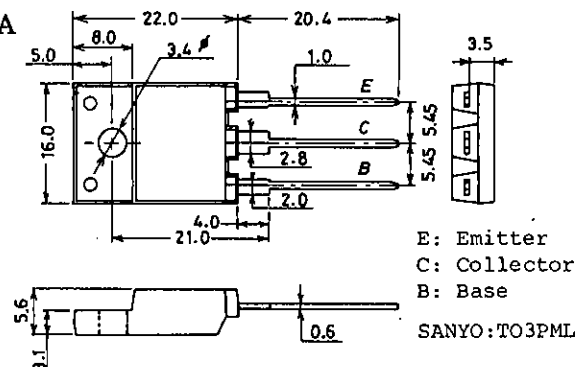
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* : For the $h_{FE(1)}$ of the 2SC4460, specify two ranks or more in principle.

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

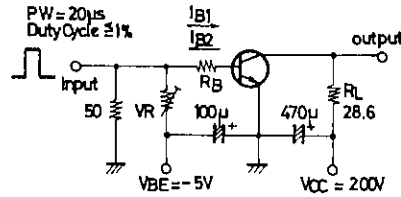
(unit : mm)



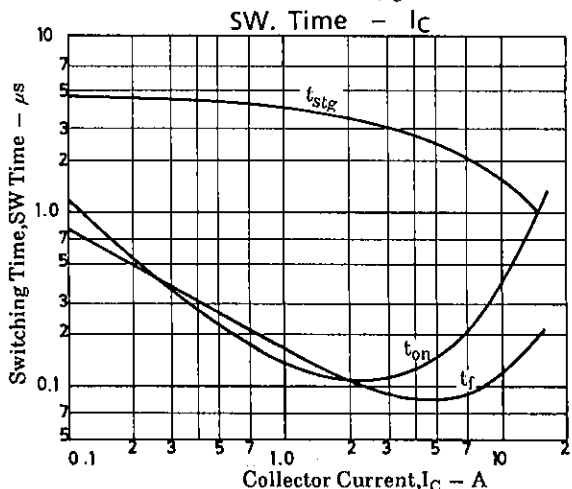
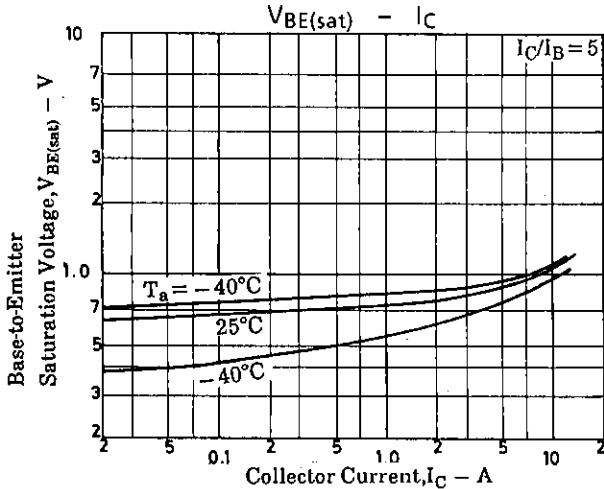
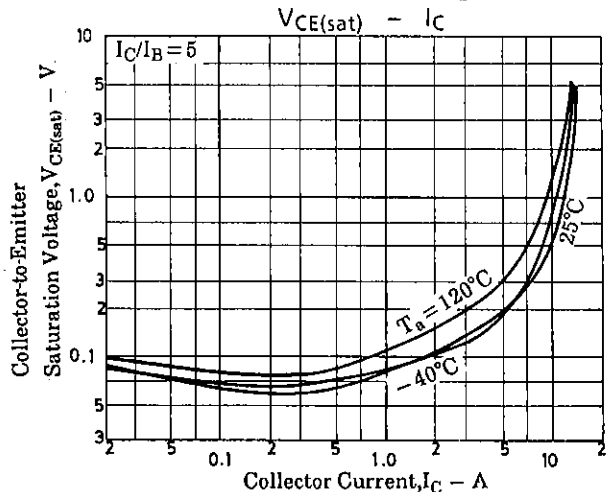
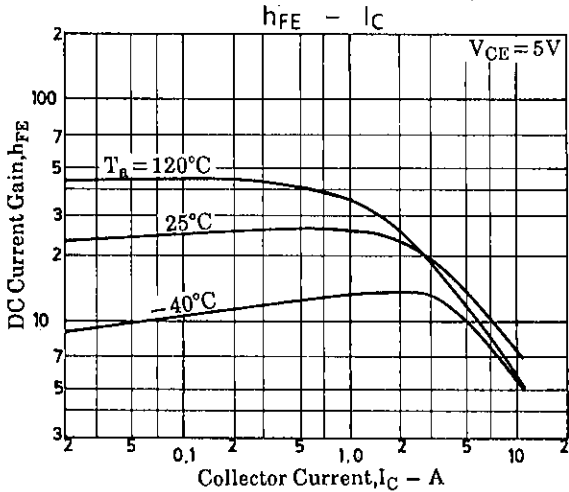
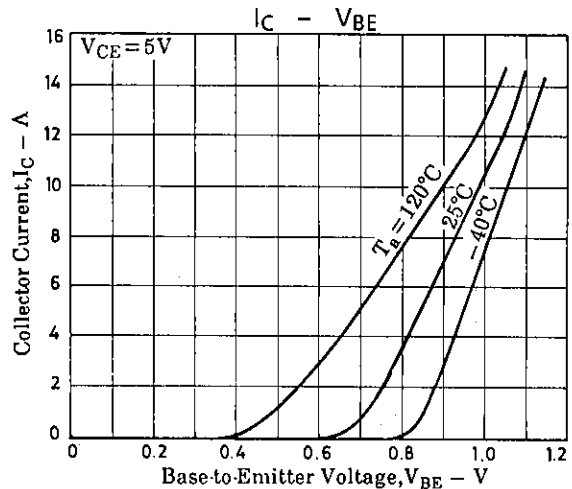
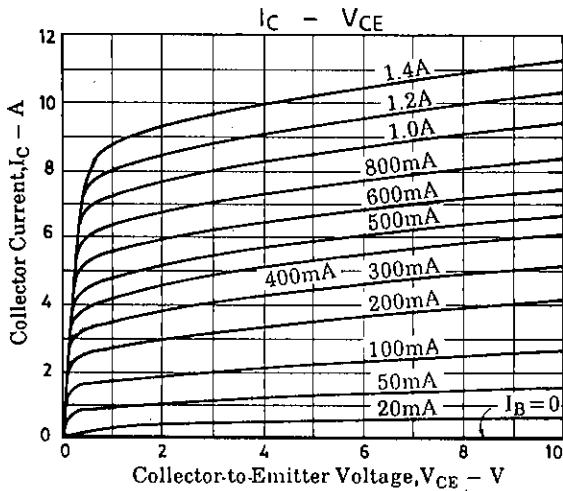
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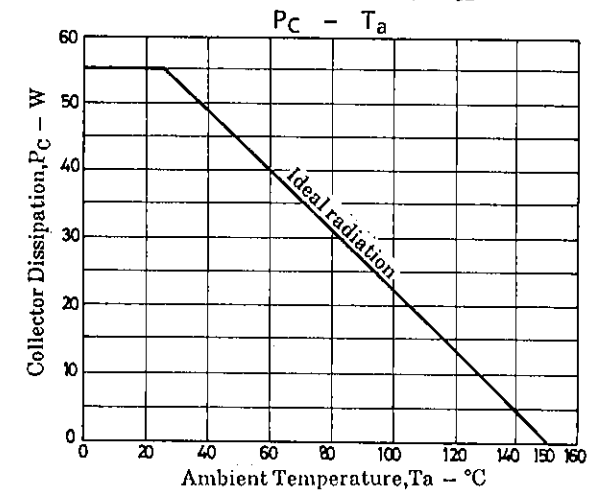
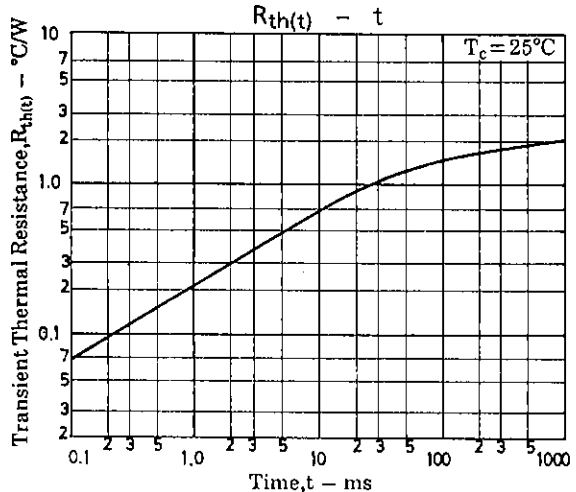
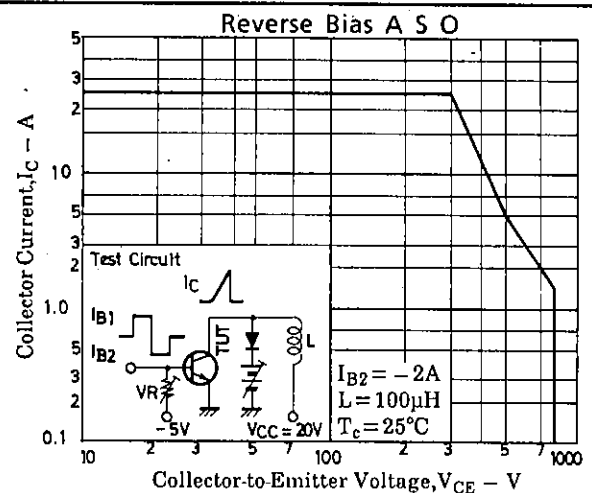
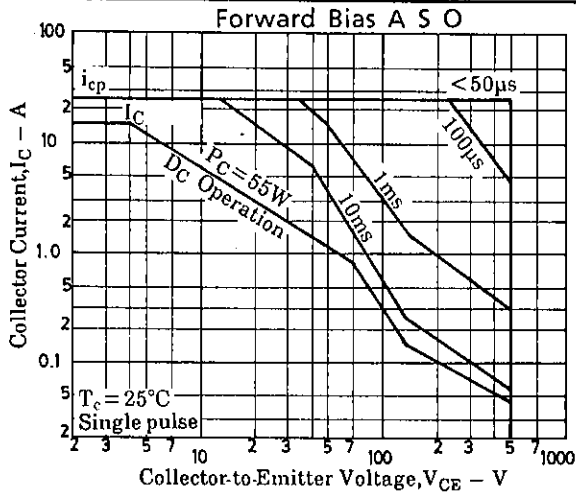
			min	typ	max	unit
Turn-ON time	t_{on}	$V_{CC}=200V,$ $5I_{B1} = -2.5I_{B2} = I_C = 7A,$ $R_L = 28.6\Omega$			0.5	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				0.3	μs

Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)





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