

SANYO	No.3144	2SC4598
	NPN Triple Diffused Planar Silicon Transistor Switching Regulator Applications	

Features

- Surface mount type device making the following possible
- Reduction in the number of manufacturing processes for 2SC4598-applied equipment
- High density surface mount applications
- Small size of 2SC4598-applied equipment
- High breakdown voltage, high reliability
- Fast switching speed
- Wide ASO
- Adoption of MBIT process

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	500	V
Collector to Emitter Voltage	V _{CEO}	400	V
Emitter to Base Voltage	V _{EBO}	7	V
Collector Current	I _C	7	A
Collector Current(Pulse)	I _{CP}	14	A
Base Current	I _B	3	A
Collector Dissipation	P _C	1.65	W
		50	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	- 55 to + 150	°C

T_c = 25°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = 400V, 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 = 0.8A	15*		50*	
	h _{FE} (2)	V _{CE} = 5V, I _C = 4A	10			
	h _{FE} (3)	V _{CE} = 5V, I _C = 10mA	10			
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.8A		20		MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		80		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 4A, I _B = 0.8A			0.8	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 4A, I _B = 0.8A			1.5	V

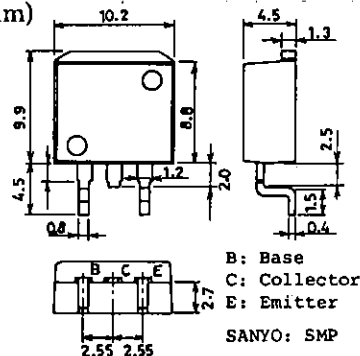
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* : For the h_{FE}(1) of the 2SC4598, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2069

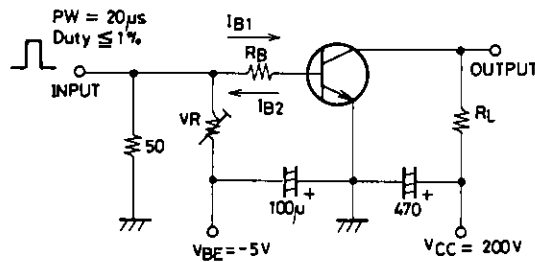
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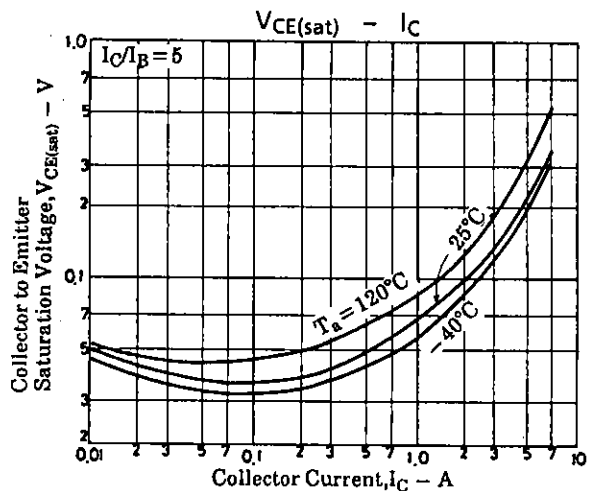
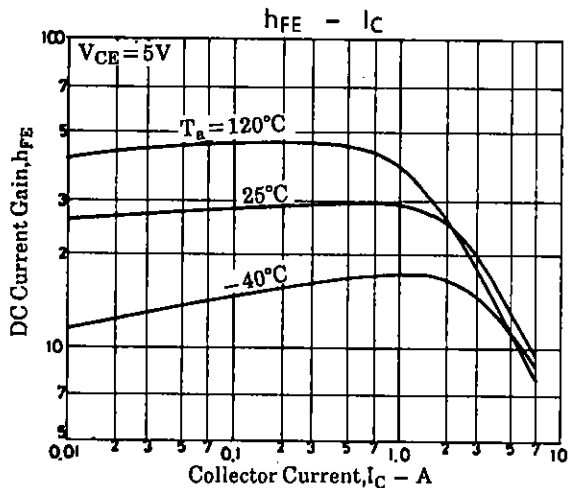
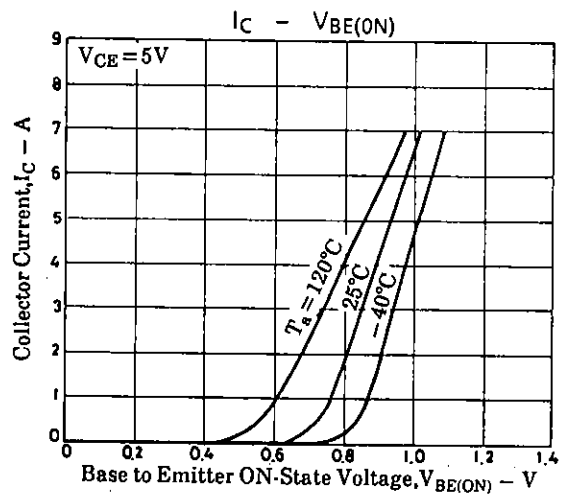
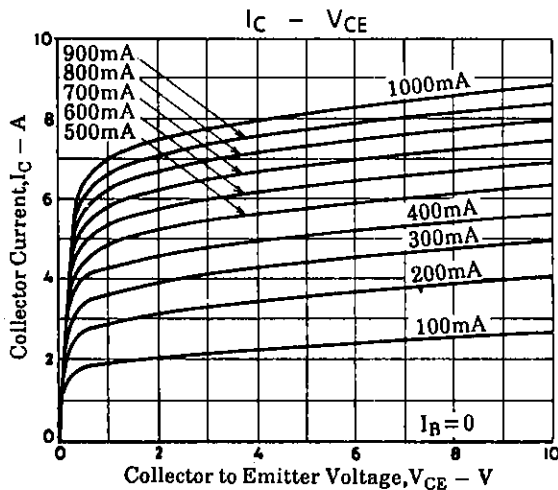
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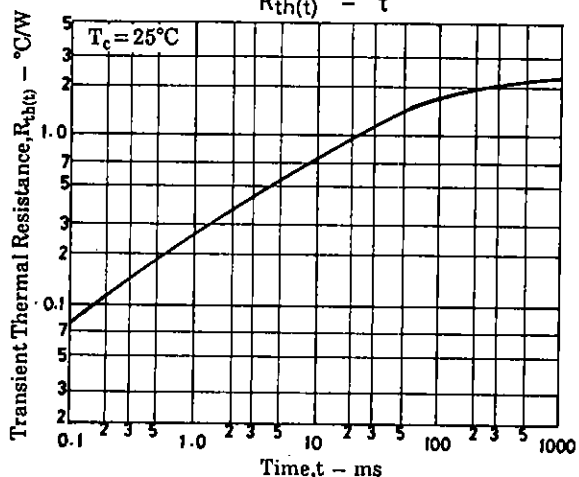
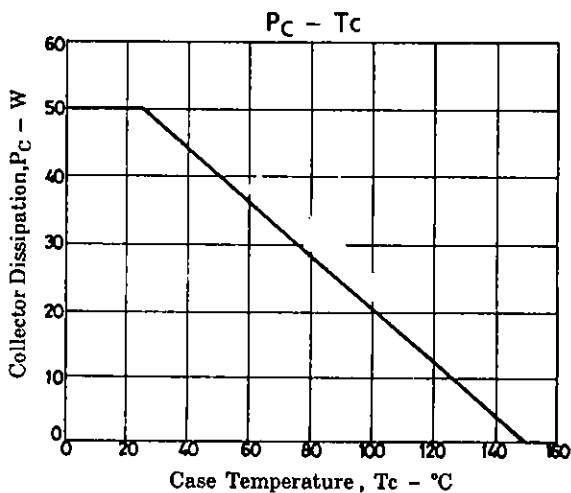
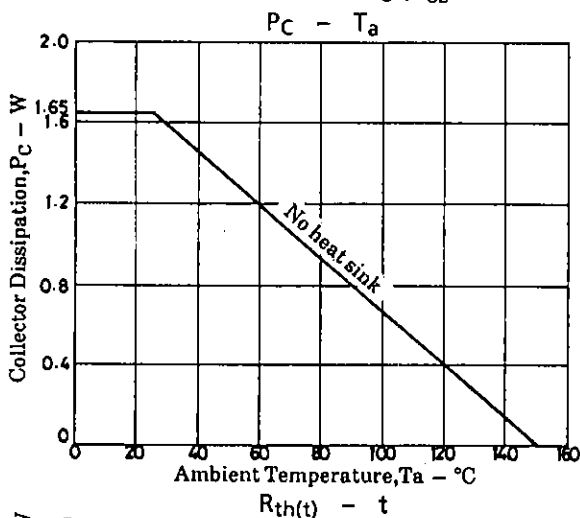
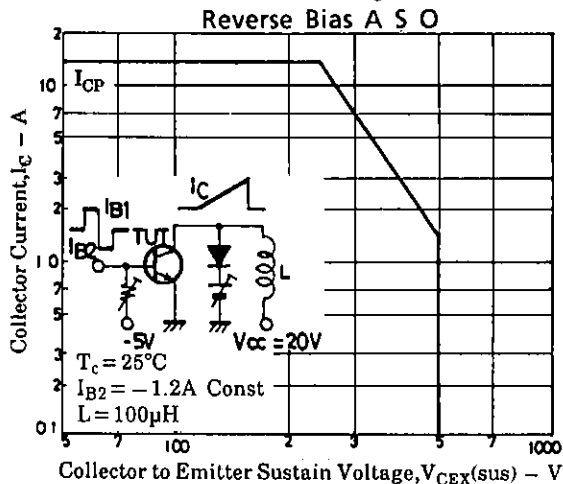
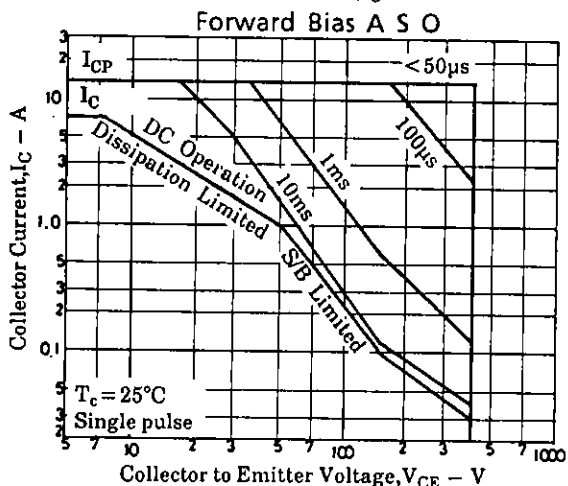
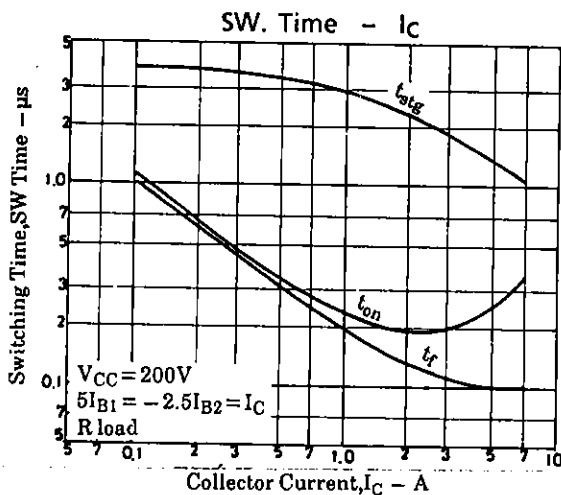
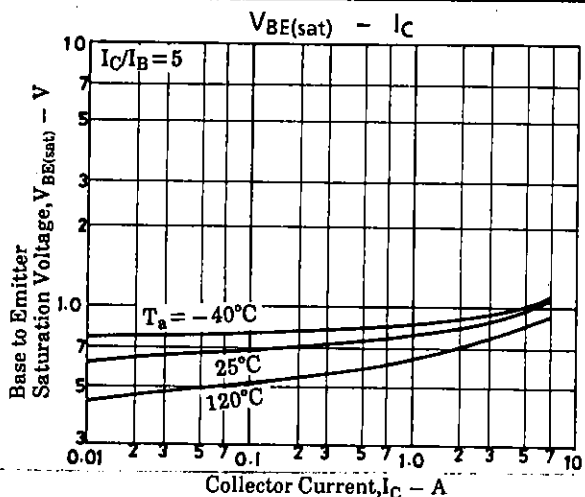
			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	500			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 3\text{A}, I_{B1} = -0.3\text{A},$ $L = 1\text{mH}, I_{B2} = -1.2\text{A}, \text{clamped}$	400			V
Turn-ON Time	t_{on}	$I_C = 5\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -2\text{A}, R_L = 40\Omega,$ $V_{CC} = 200\text{V}$			0.5	μs
Storage Time	t_{stg}				2.5	μs
Fall Time	t_f				0.3	μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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