

SANYO	No.3146	2SC4600
	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 2SC4600-applied equipment
 - High density surface mount applications
 - Small size of 2SC4600-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}	800	V
Collector to Emitter Voltage	V _{CEO}	500	V
Emitter to Base Voltage	V _{EBO}	7	V
Collector Current	I _C	5	A
Collector Current(Pulse)	I _{CP}	10	A
Base Current	I _B	2	A
Collector Dissipation	P _C	1.65	W
		T _c = 25°C	
Junction Temperature	T _j	50	W
Storage Temperature	T _{stg}	150	°C
		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Collector Cutoff Current	I _{CBO}	V _{CB} = 500V, I _E = 0	min	typ	max
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10
DC Current Gain	h _{FE} (1)	V _{CE} = 5V, I _C = 0.6A			μA
	h _{FE} (2)	V _{CE} = 5V, I _C = 3A	15*		50*
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.6A		8	
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		18	MHz
C-E Saturation Voltage	V _{CE(sat)}	I _C = 3A, I _B = 0.6A		80	pF
B-E Saturation Voltage	V _{BE(sat)}	I _C = 3A, I _B = 0.6A			1.0
					V
					1.5
					V

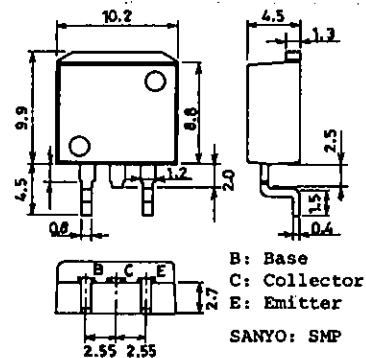
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* : For the h_{FE}(1) of the 2SC4600, specify two ranks or more in principle.

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

(unit : mm)

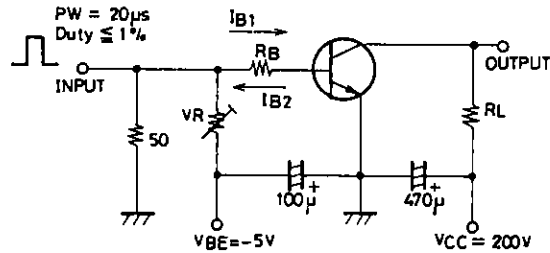


2SC4600

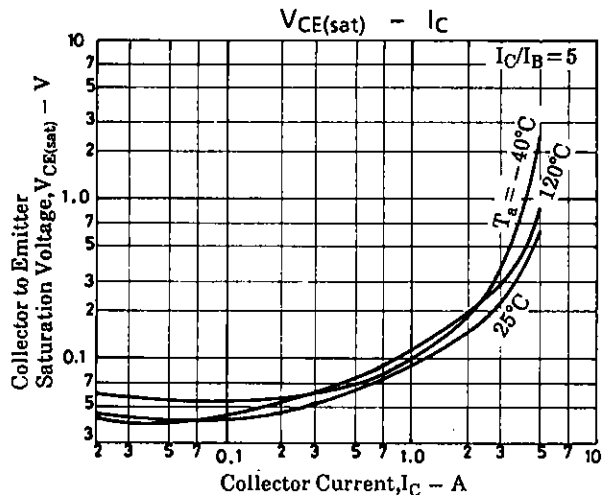
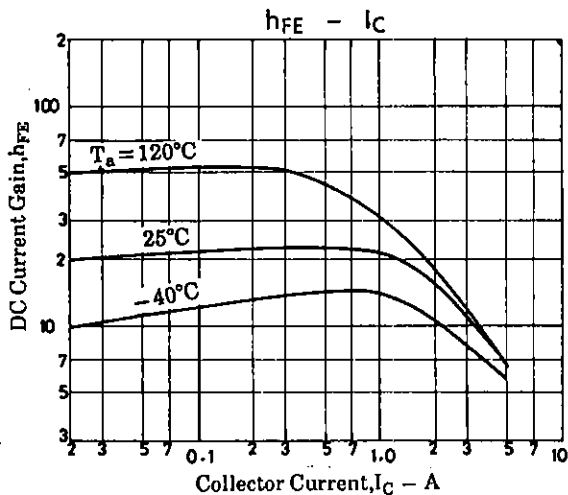
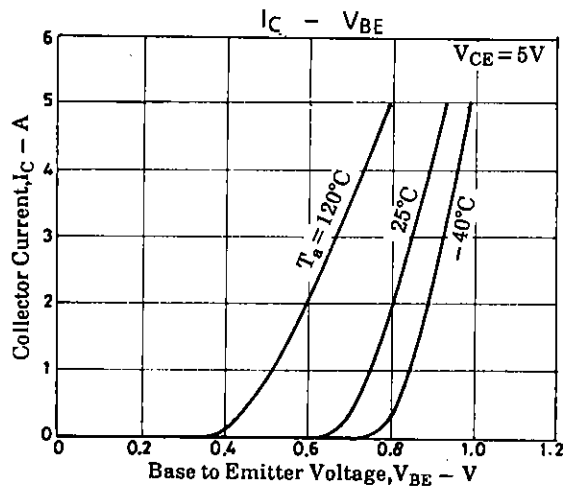
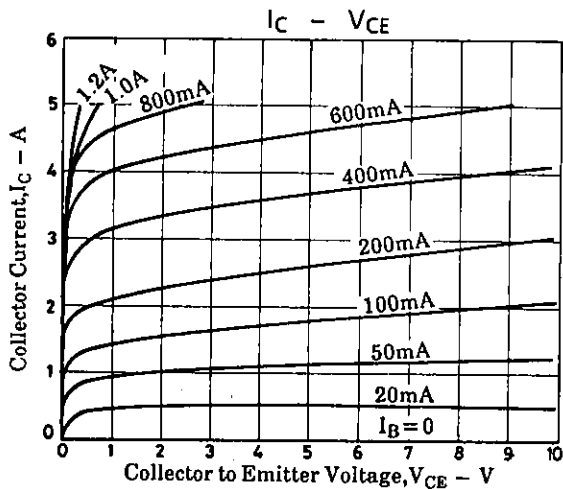
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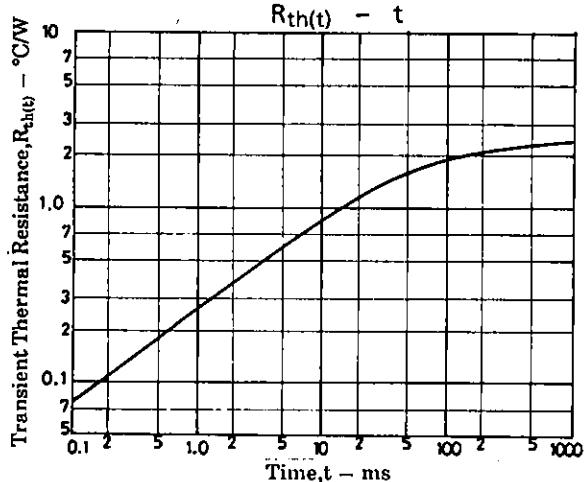
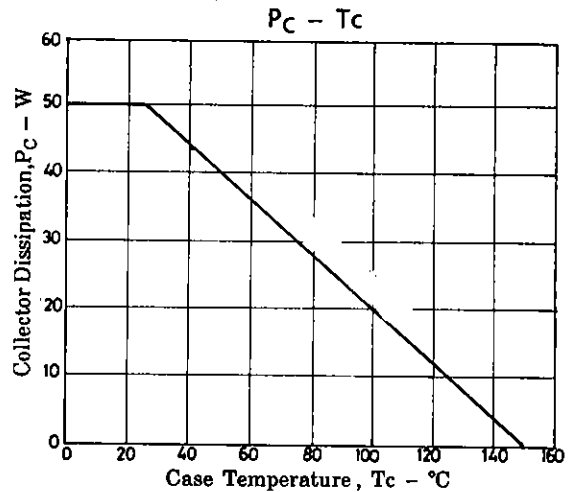
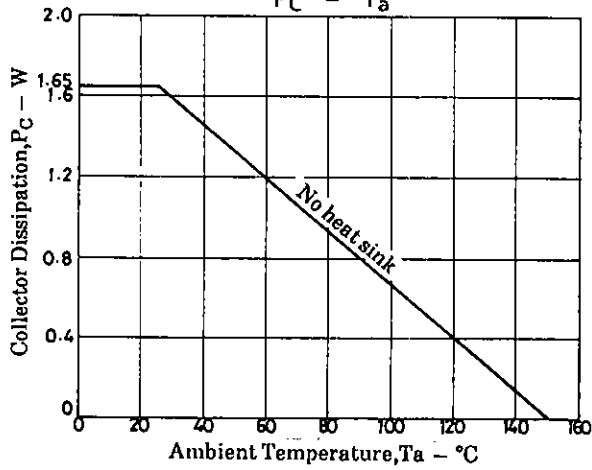
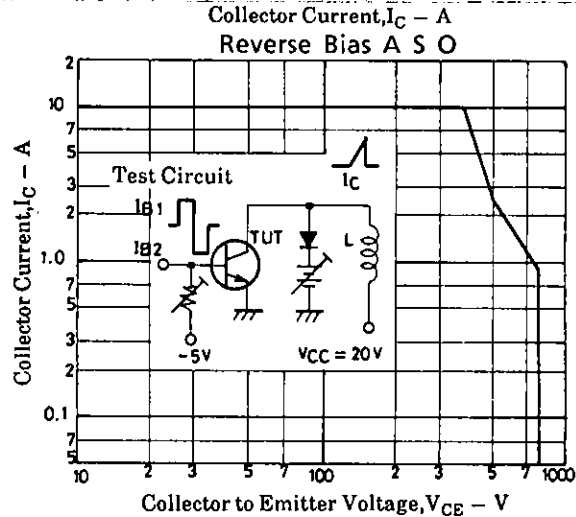
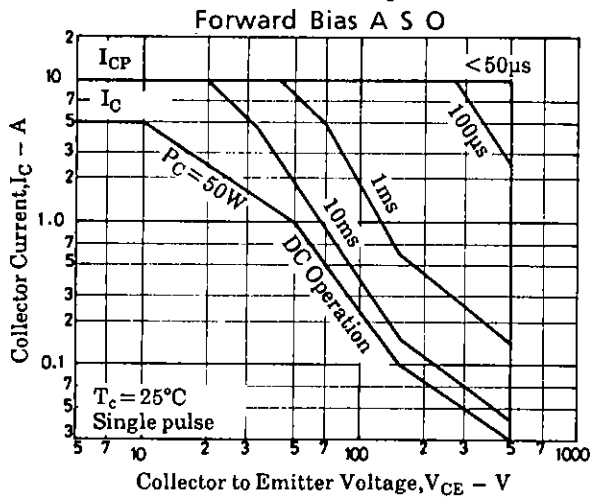
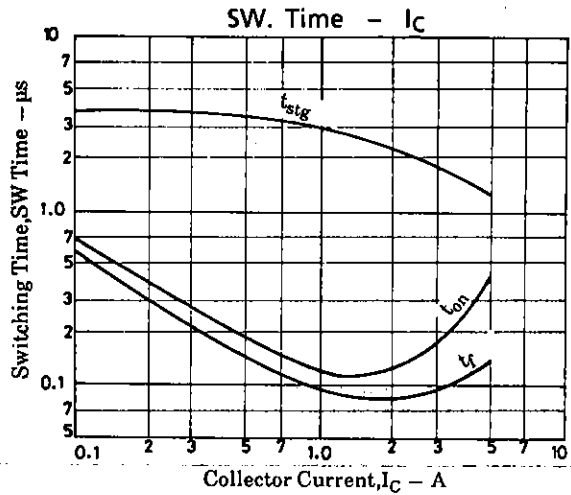
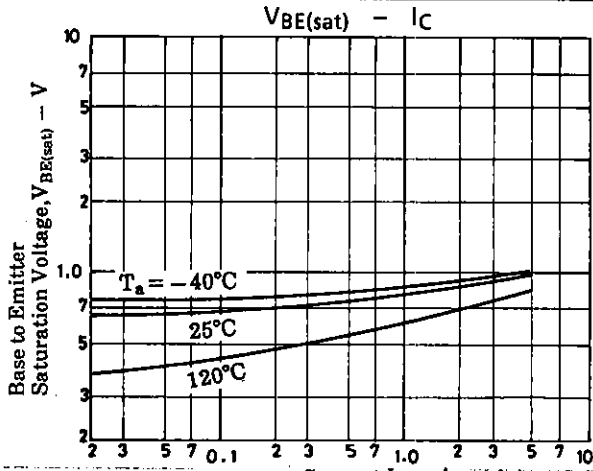
			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	800			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	500			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEO(sus)}$	$I_C = 5\text{A}, I_{B1} = 1\text{A}, L = 50\mu\text{H}$	500			V
	$V_{CEX(sus)}$	$I_C = 2.5\text{A}, I_{B1} = -I_{B2} = 1\text{A}, L = 1\text{mH}, \text{clamped}$	500			V
Turn-ON Time	t_{on}	$I_C = 4\text{A}, I_{B1} = 0.8\text{A},$ $I_{B2} = -1.6\text{A}, R_L = 50\Omega,$ $V_{CC} = 200\text{V}$			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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