

SANYO	No.3148	2SC4602
	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 2SC4602-applied equipment
 - High density surface mount applications
 - Small size of 2SC4602-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}	1100	V
Collector to Emitter Voltage	V _{CE0}	800	V
Emitter to Base Voltage	V _{EB0}	7	V
Collector Current	I _C	3	A
Collector Current(Pulse)	I _{CP}	10	A
Base Current	I _B	1.5	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

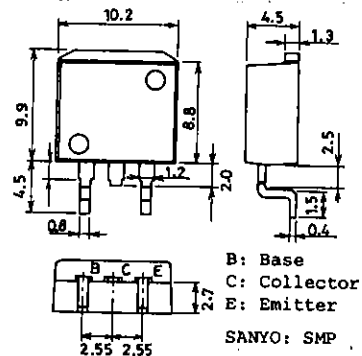
Collector Cutoff Current	I _{CB0}	V _{CB} = 800V, I _E = 0	min	typ	max unit
Emitter Cutoff Current	I _{EB0}	V _{EB} = 5V, I _C = 0			10 μA
DC Current Gain	h _{FE} (1)	V _{CE} = 5V, I _C = 0.2A	10*		40*
	h _{FE} (2)	V _{CE} = 5V, I _C = 1A	8		
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.2A		15	MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		60	pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 1.5A, I _B = 0.3A			2.0 V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 1.5A, I _B = 0.3A			1.5 V

Continued on next page.

* : For the h_{FE}(1) of the 2SC4602, specify two ranks or more in principle.

10 K 20	15 L 30	20 M 40
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Package Dimensions 2069
(unit: mm)

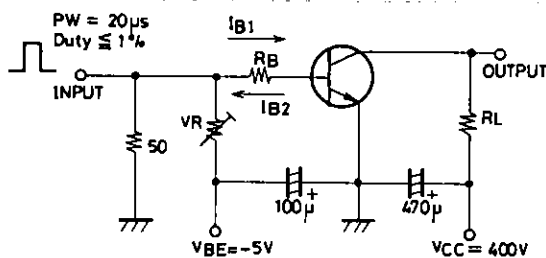


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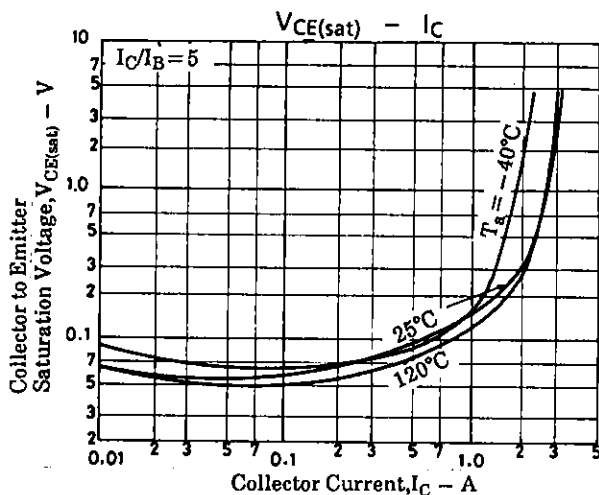
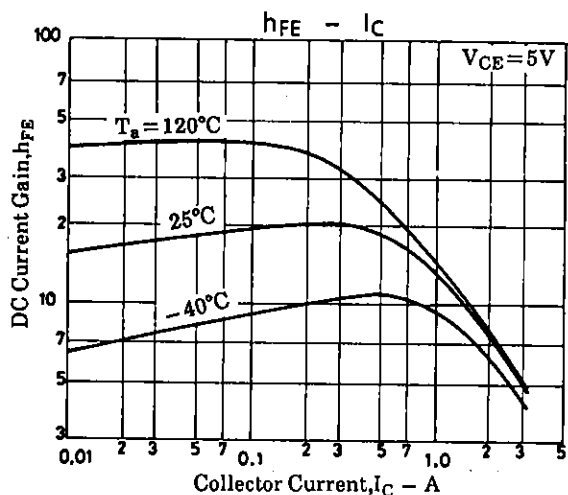
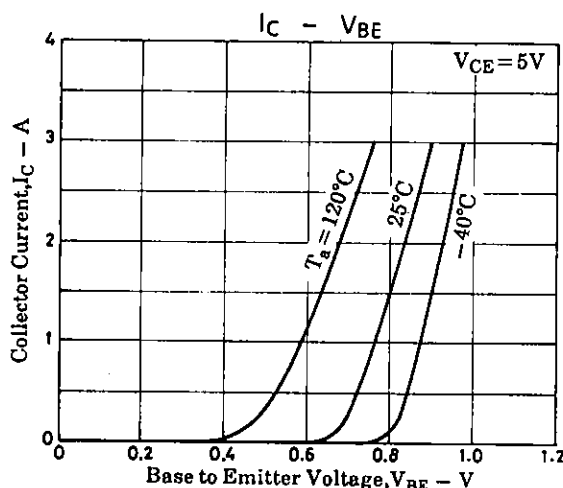
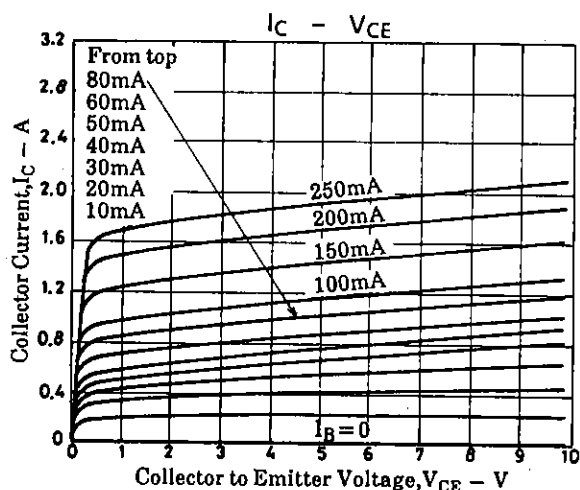
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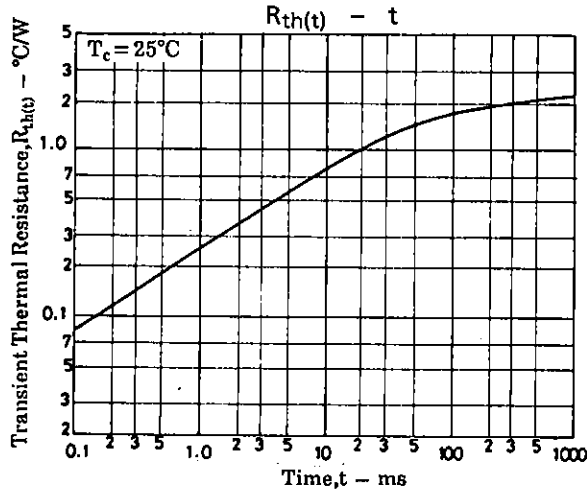
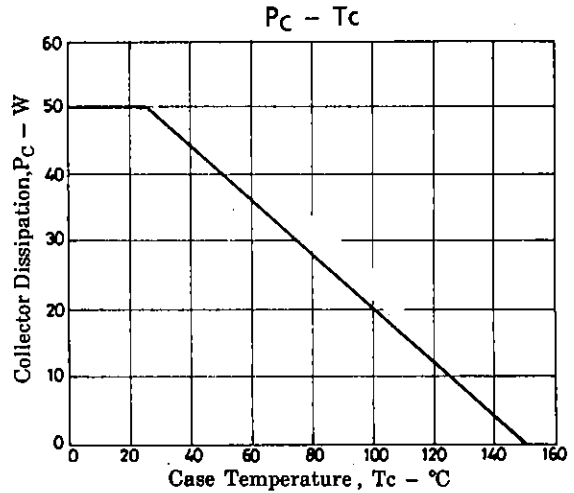
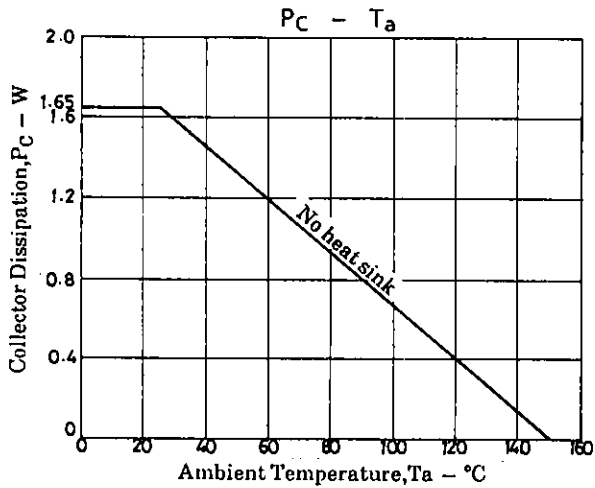
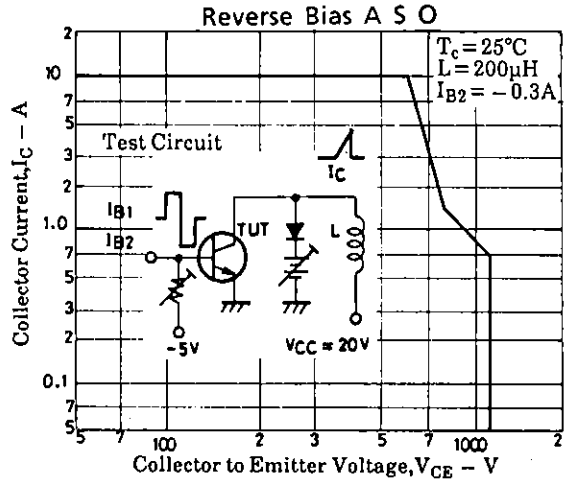
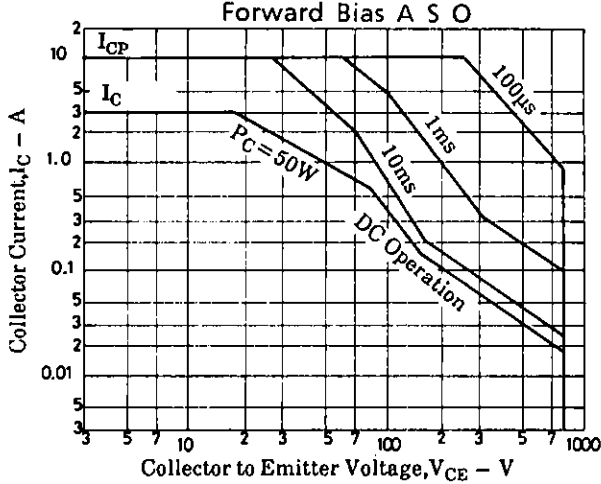
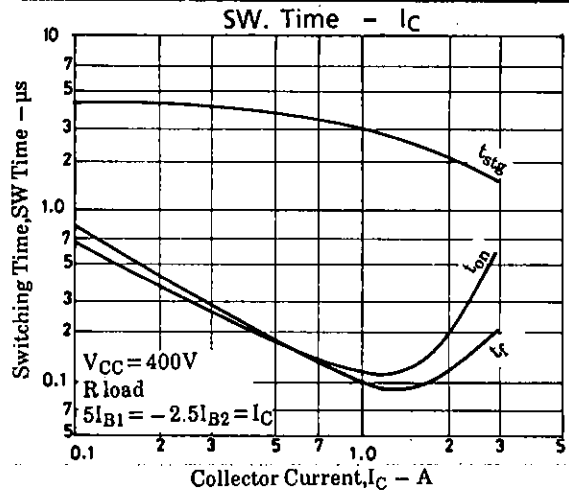
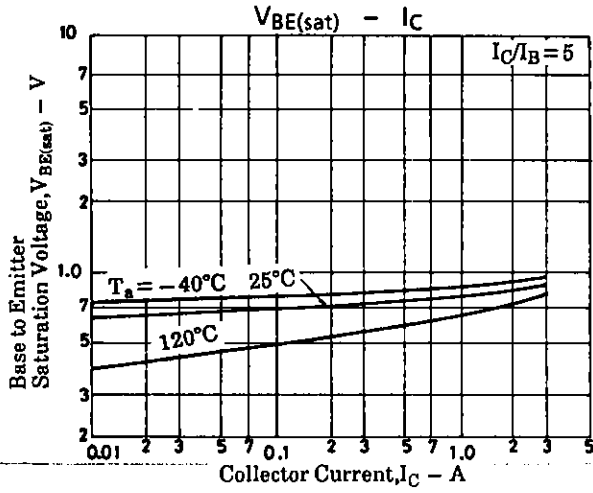
			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 1.5\text{A}, I_{B1} = -I_{B2} = 0.3\text{A},$ $L = 2\text{mH}, \text{clamped}$	800			V
Turn-ON Time	t_{on}	$I_C = 2\text{A}, I_{B1} = 0.4\text{A},$ $I_{B2} = -0.8\text{A}, R_L = 200\Omega,$ $V_{CC} = 400\text{V}$			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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