



No.3147

2SC4601

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 2SC4601-applied equipment
 - High density surface mount applications
 - Small size of 2SC4601-applied equipment
- High breakdown voltage, high reliability
- Fast switching speed
- Wide ASO
- Adoption of MBIT process

Absolute Maximum Ratings at Ta = 25°C

Collector to Base Voltage	V _{CB0}		1100	V
Collector to Emitter Voltage	V _{CEO}		800	V
Emitter to Base Voltage	V _{EBO}		7	V
Collector Current	I _C		1.5	A
Collector Current(Pulse)	I _{CP}	PW ≤ 300μs, duty cycle ≤ 10%	5	A
Base Current	I _B		0.8	A
Collector Dissipation	P _C		1.65	W
		T _c = 25°C	40	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		- 55 to + 150	°C

Electrical Characteristics at Ta = 25°C

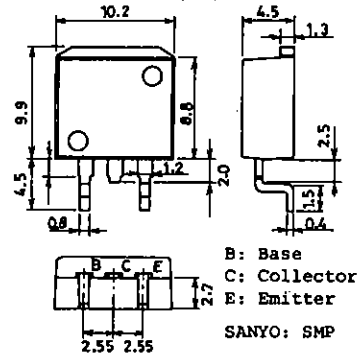
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 800V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} = 5V, I _C = 0.1A	10*		40*	
	h _{FE} (2)	V _{CE} = 5V, I _C = 0.5A	8			
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.1A		15		MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		35		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 0.75A, I _B = 0.15A			2.0	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 0.75A, I _B = 0.15A			1.5	V

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* : For the h_{FE}(1) of the 2SC4601, 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)

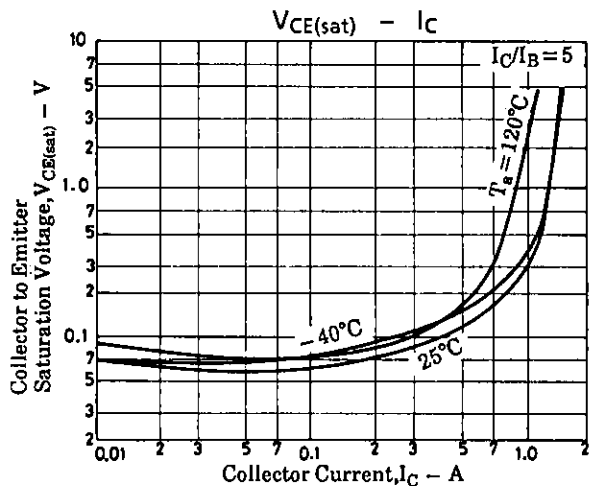
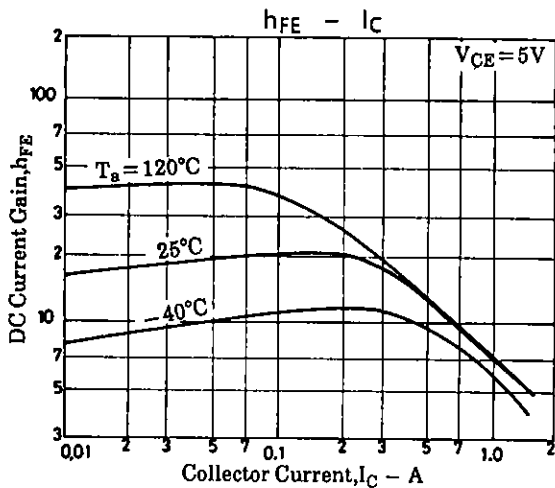
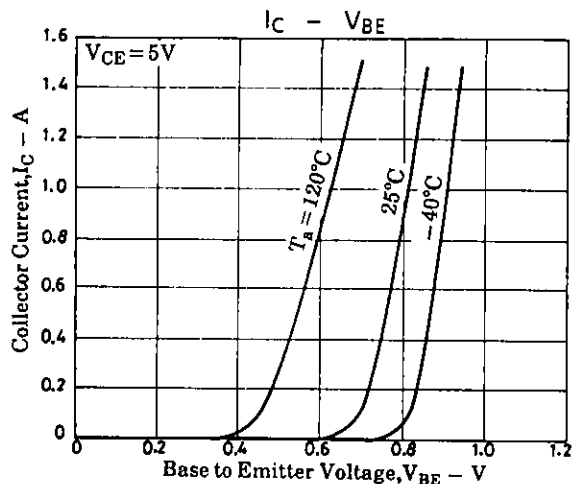
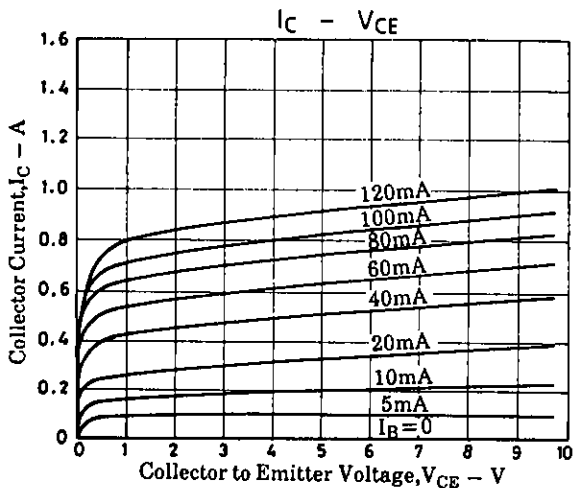
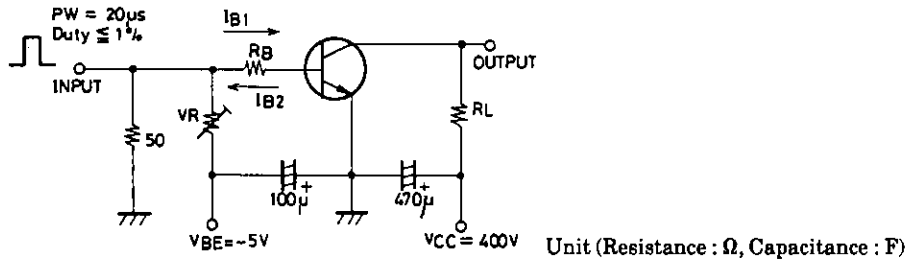


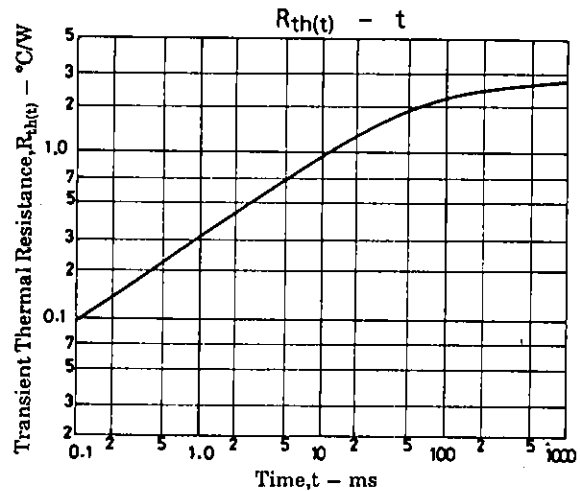
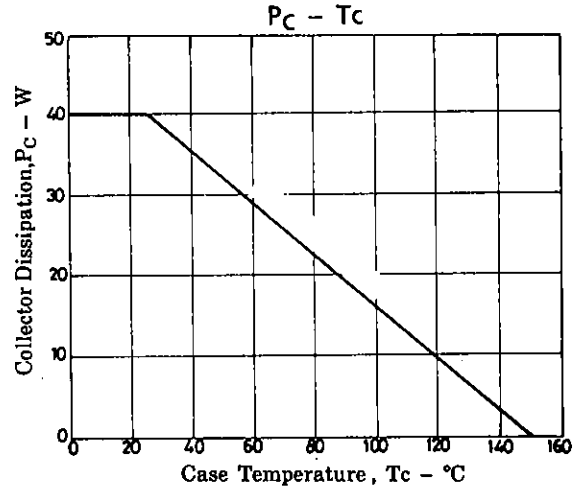
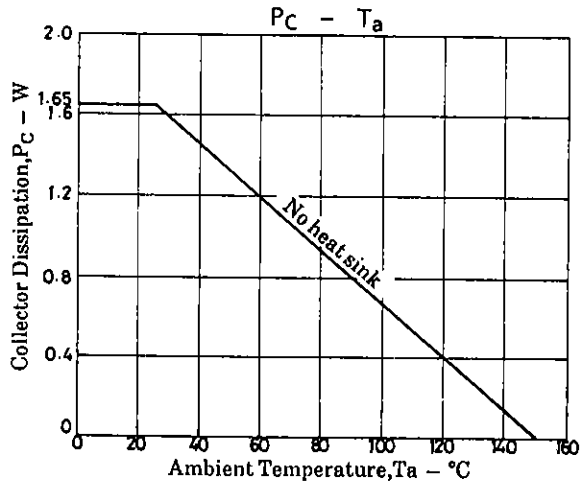
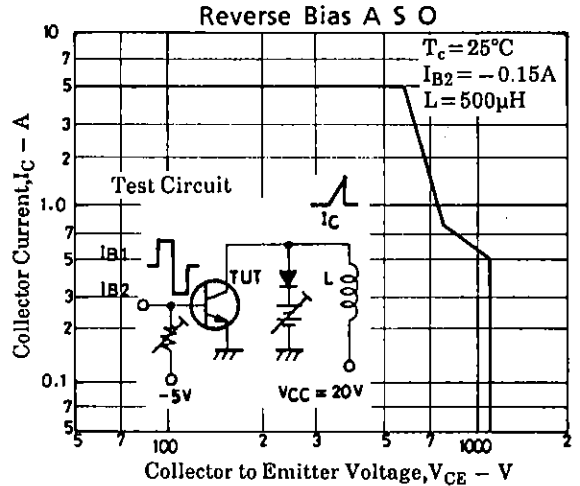
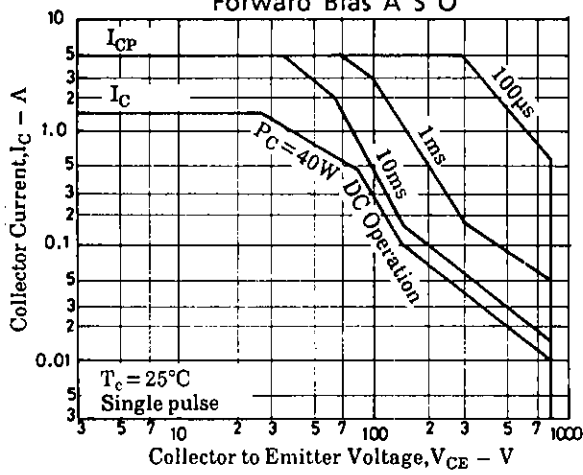
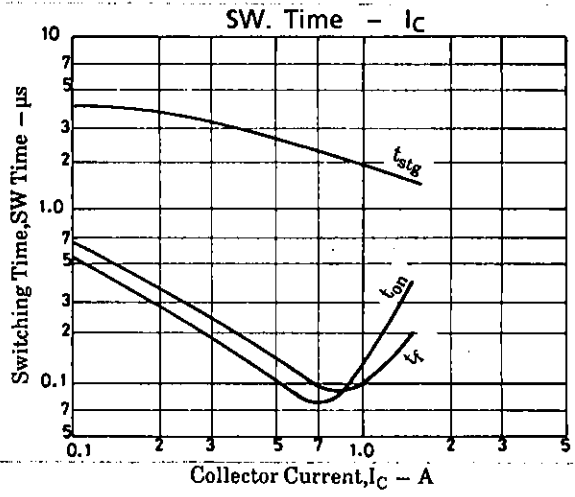
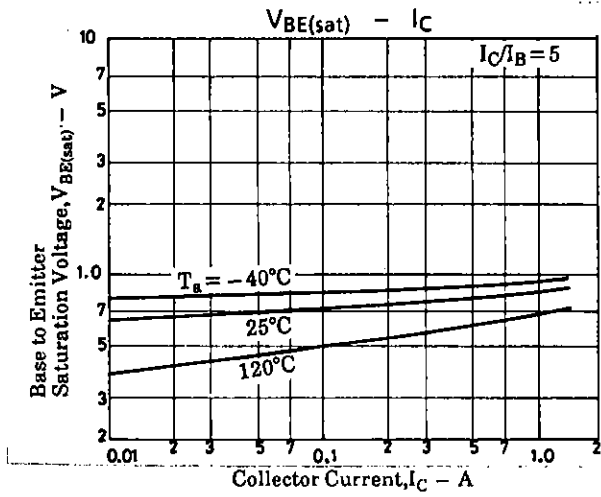
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5mA, R_{BE} = \infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 0.75A, I_{B1} = -I_{B2} = 0.15A,$ $L = 5mH, \text{clamped}$	800			V
Turn-ON Time	t_{on}	$I_C = 1A, I_{B1} = 0.2A,$ $I_{B2} = -0.4A, R_L = 400\Omega,$ $V_{CC} = 400V$		0.5		μs
Storage Time	t_{stg}			3.0		μs
Fall Time	t_f			0.3		μs

Switching Time Test Circuit





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