

	No.2547A	<h1 style="margin: 0;">2SC4171</h1> <p style="margin: 0;">NPN Triple Diffused Planar Silicon Transistor</p> <p style="margin: 0;">Switching Regulator Applications</p>
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Features

- . High breakdown voltage ($V_{CBO} \geq 800V$)
- . Fast switching speed
- . Wide ASO
- . Suitable for sets whose height is restricted

Absolute Maximum Ratings at $T_a=25^\circ C$

Collector to Base Voltage	V_{CBO}	800		V
Collector to Emitter Voltage	V_{CEO}	500		V
Emitter to Base Voltage	V_{EBO}	7		V
Collector Current	I_C	3		A
Peak Collector Current	i_{op}	6	$PW \leq 300\mu s, Duty\ Cycle \leq 10\%$	A
Base Current	I_B	1		A
Collector Dissipation	P_C	1.65		W
		40	$T_c=25^\circ C$	W
Junction Temperature	T_j	150		$^\circ C$
Storage Temperature	T_{stg}	-55 to +150		$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

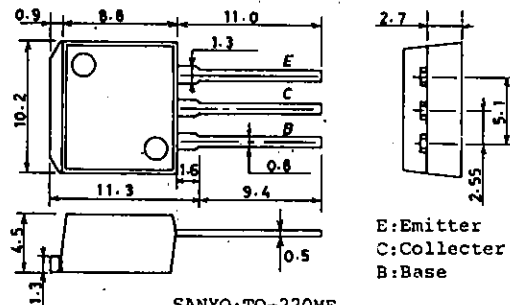
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=500V, I_B=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5V, I_C=0.3A$	15*		50*	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=1.5A$	8			
C-E Saturation Voltage	$V_{CE}(sat)$	$I_C=1.5A, I_B=0.3A$			1.0	V
B-E Saturation Voltage	$V_{BE}(sat)$	$I_C=1.5A, I_B=0.3A$			1.5	V
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.3A$		18		MHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1MHz$		40		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	800			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	500			V
B-E Breakdown Voltage	$V_{(BR)BEO}$	$I_E=1mA, I_C=0$	7			V

Continued on next page.

*: The $h_{FE}(1)$ of the 2SC4171 is classified as follows. When specifying the $h_{FE}(1)$ rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2049
(unit: mm)

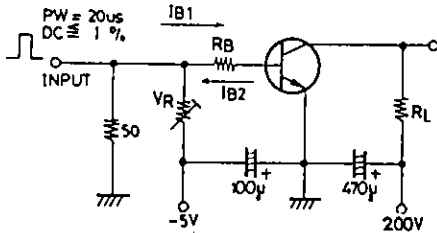


SANYO: TO-220MF

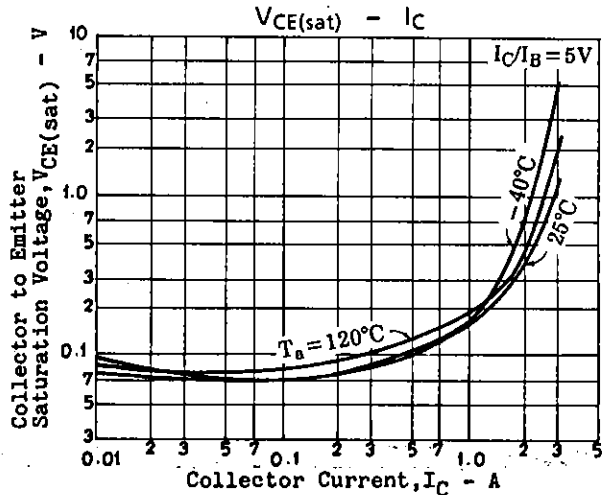
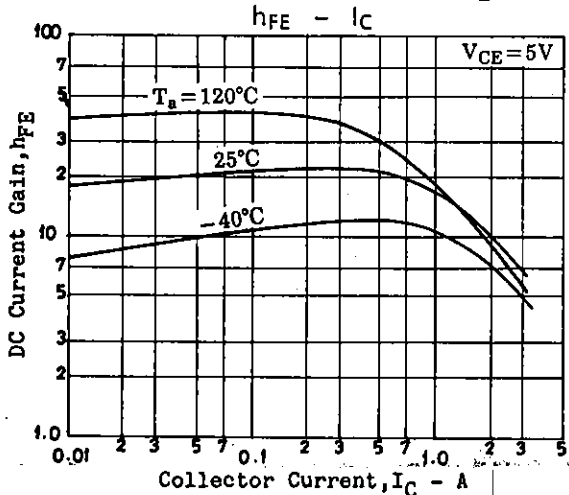
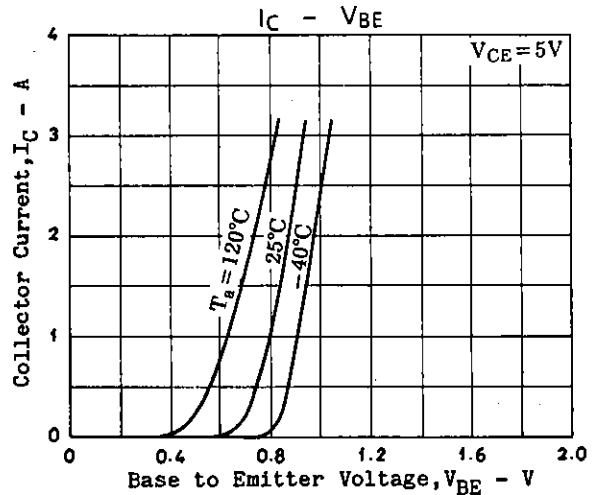
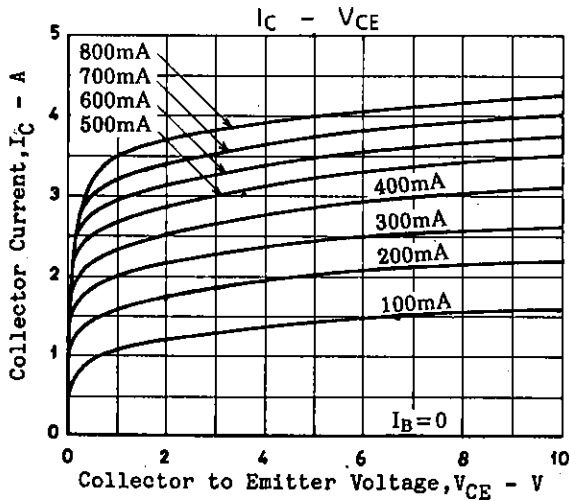
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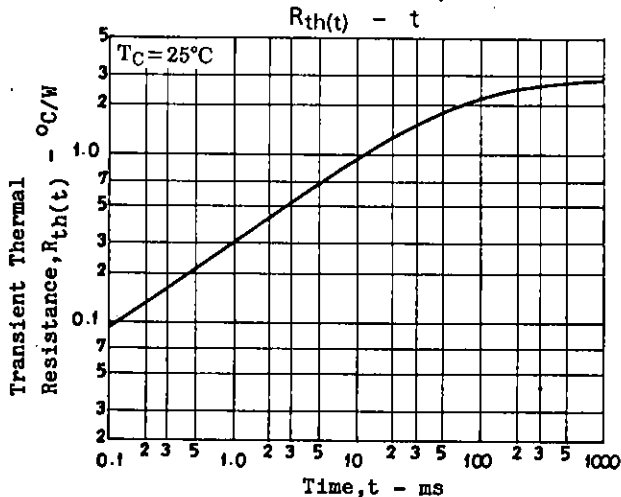
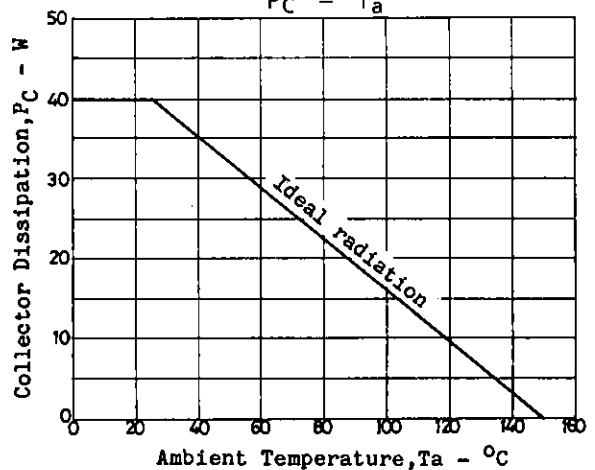
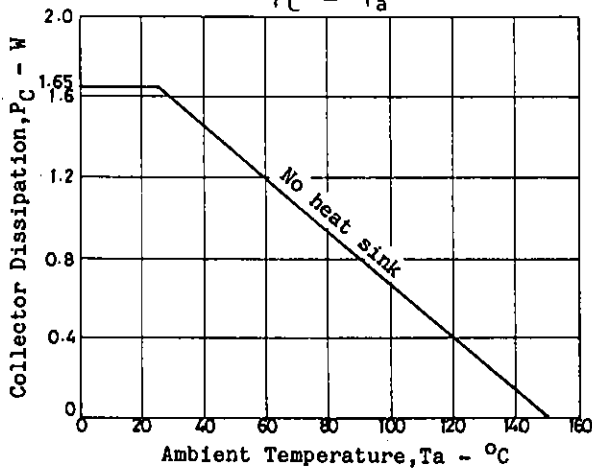
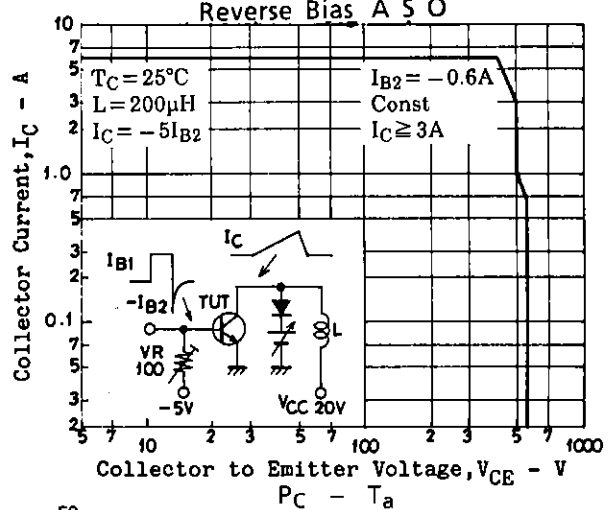
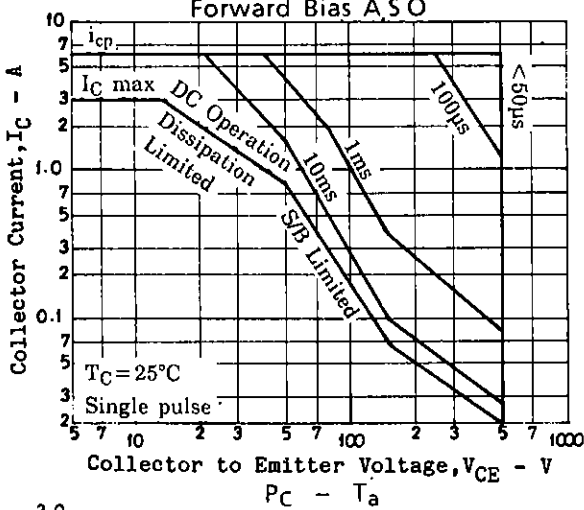
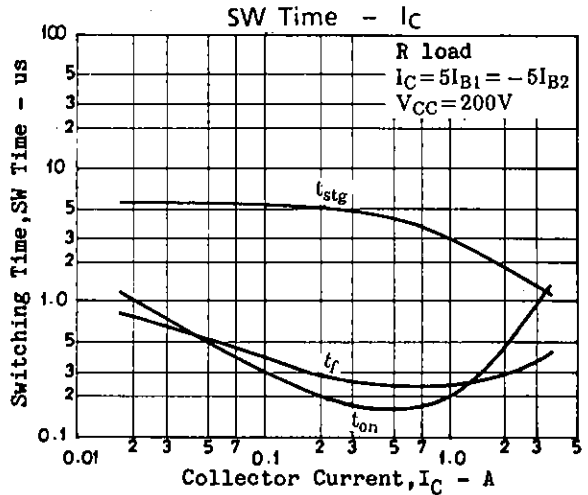
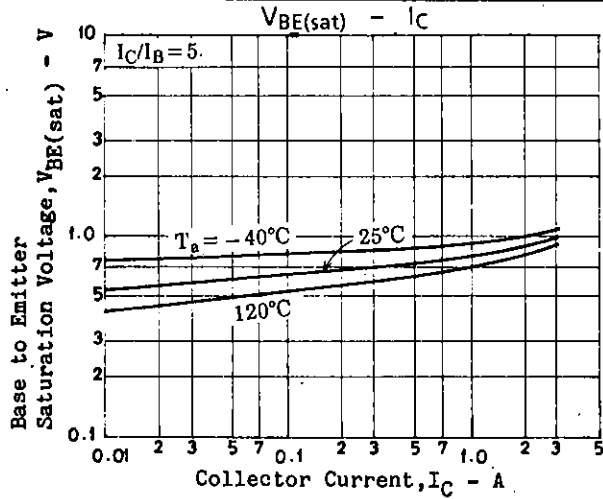
			min	typ	max	unit
C-E Sustain Voltage	$V_{CEO}(sus)$	$I_C=3A, I_B=0.6A$ $L=50\mu H$	500			V
	$V_{CEX}(sus)(1)$	$I_C=3A, I_{B1}=0.6A$ $L=200\mu H, I_{B2}=-0.6A, Clamped$	500			V
	$V_{CEX}(sus)(2)$	$I_C=0.6A, I_{B1}=0.12A$ $L=200\mu H, I_{B2}=-0.12A, Clamped$	550			V
Turn-on Time	t_{on}	$I_C=2A, I_{B1}=0.4A$ $I_{B2}=-0.4A, R_L=100ohms$ $V_{CC}=200V$			1.0	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				1.0	μs

Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)





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