

SANYO

No.2709

2SC4219

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

- High breakdown voltage, high reliability ($V_{CE0} \geq 400V$).
- Fast switching speed (t_f : 0.1 μ s typ).
- Wide ASO
- Adoption of MBIT process
- Suitable for sets whose height is restricted

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

			unit
Collector to Base Voltage	V_{CB0}	500	V
Collector to Emitter Voltage	V_{CE0}	400	V
Emitter to Base Voltage	V_{EB0}	7	V
Collector Current	I_C	4	A
Peak Collector Current	i_{cp} $PW \leq 300\mu s$, duty cycle $\leq 10\%$	8	A
Base Current	I_B	1.5	A
Collector Dissipation	P_C	1.65	W
	$T_c = 25^\circ C$	40	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

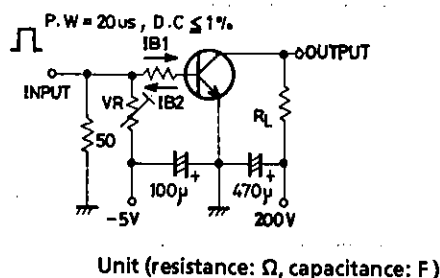
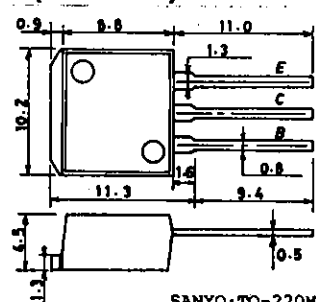
Electrical Characteristics at $T_a = 25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = 400V, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = 5V, I_C = 0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 0.4A$	15		50	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 2A$	10			
	$h_{FE(3)}$	$V_{CE} = 5V, I_C = 10mA$	10			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.4A$			0.8	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 2A, I_B = 0.4A$			1.5	V
Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 0.4A$		20		MHz
Output Capacitance	c_{ob}	$V_{CB} = 10V, f = 1MHz$		50		pF

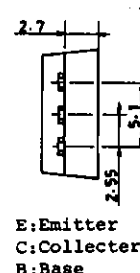
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*:The $h_{FE(1)}$ of the 2SC4219 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more.

15	L	30	20	M	40	30	N	50
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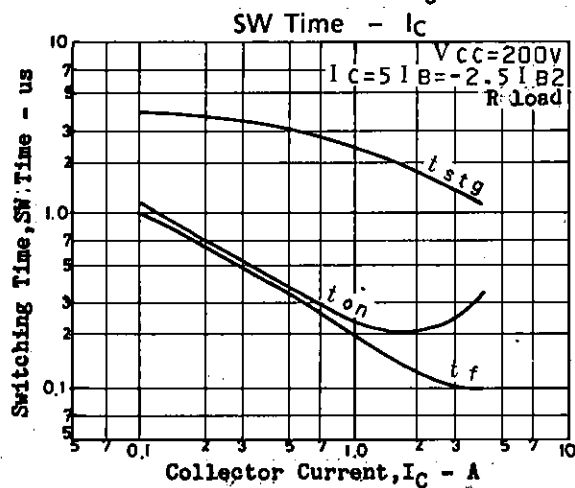
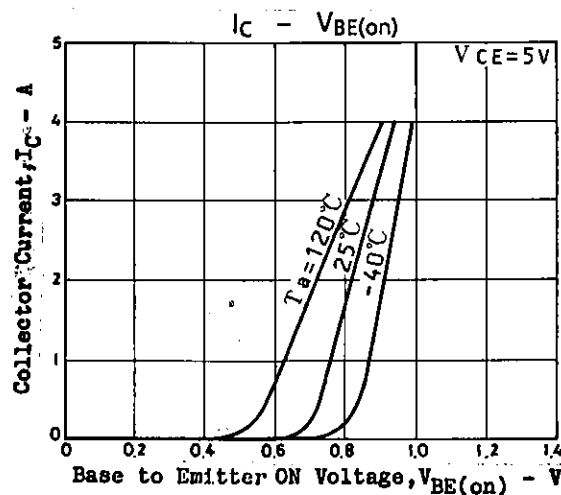
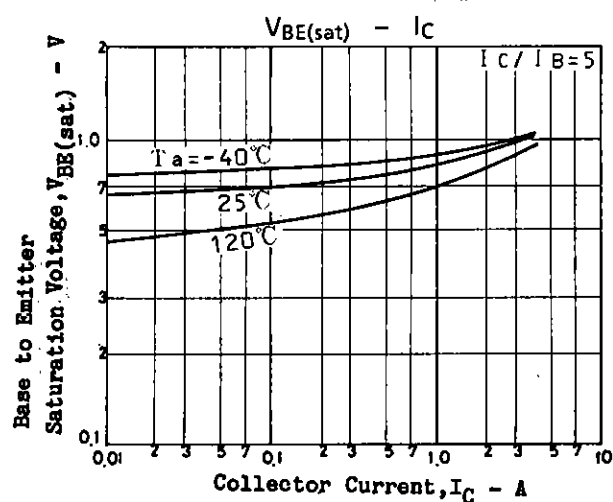
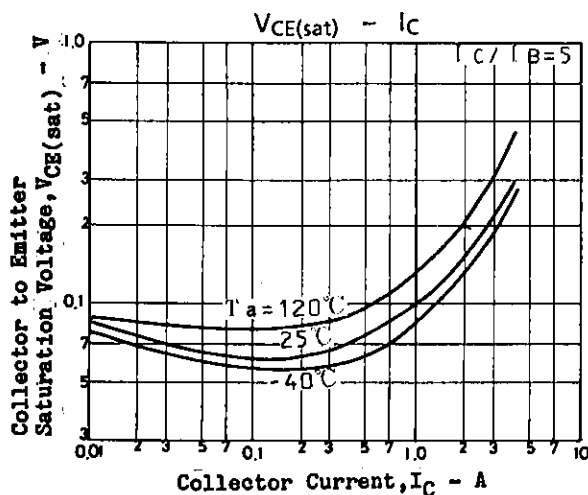
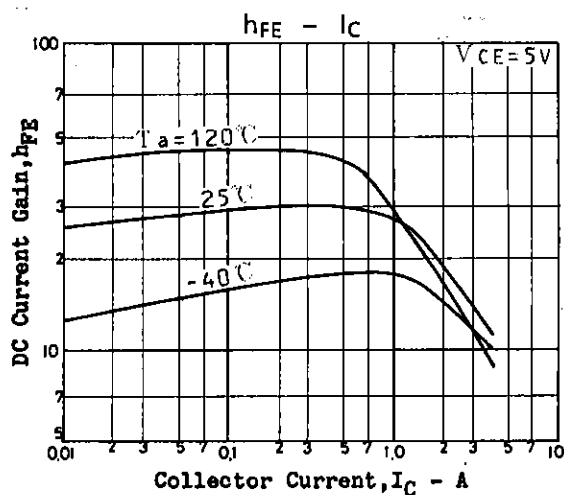
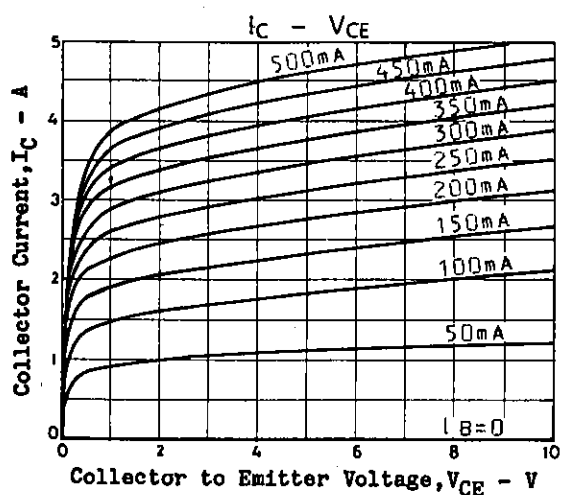
Switching Time Test Circuit**Package Dimensions (unit: mm)**

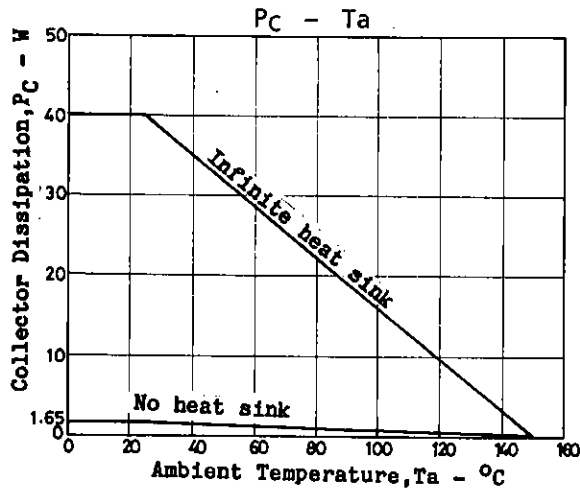
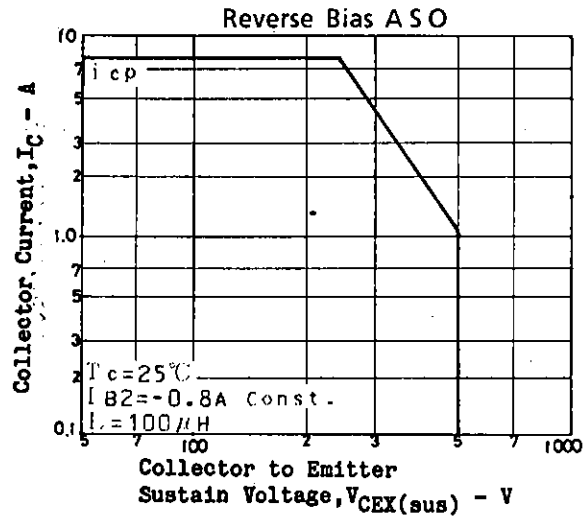
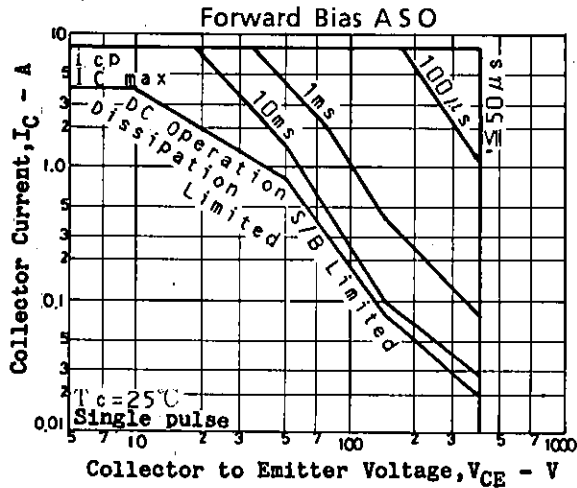
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	500			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	- 7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=2A, I_{B1}=0.2A$ $L=1mH, I_{B2}=-0.8A, \text{clamped}$	400			V
Turn-ON Time	t_{on}	$I_C=3A, I_{B1}=0.6A$ $I_{B2}=-1.2A, R_L=66.6ohms$ $V_{CC}=200V$			0.5	μs
Storage Time	t_{stg}				2.5	μs
Fall Time	t_f				0.3	μs





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