

SANYO

No.2474A

2SC4109

NPN Triple Diffused Planar Type
Silicon Transistor

SWITCHING REGULATOR APPLICATIONS

Features

- . High breakdown voltage and 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}	500	V
Collector-to-Emitter Voltage	V _{CEO}	400	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	16	A
Peak Collector Current	i _{cp}	PW ≤ 300μs, duty cycle ≤ 10%	32 A
Base Current	I _B	6	A
Collector Dissipation	P _C	2.5	W
Junction Temperature	T _j	140	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

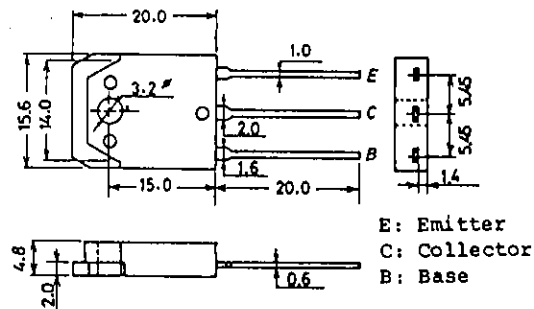
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =400V, I _E =0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} =5V, I _C =2A	15*		50*	
	h _{FE} (2)	V _{CE} =5V, I _C =10A	10			
	h _{FE} (3)	V _{CE} =5V, I _C =10mA	10			
C-E Saturation Voltage	V _{CE(sat)}	I _C =10A, I _B =2A			0.8	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =10A, I _B =2A			1.5	V
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =2A		20		MHz
Output Capacitance	c _{ob}	V _{CB} =10V, f=1MHz		230		pF

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*: The h_{FE1} of the 2SC4109 is classified as follows. When specifying the h_{FE1} rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2022
(unit:mm)



SANYO Electric Co., Ltd. Semiconductor Business Headquarters

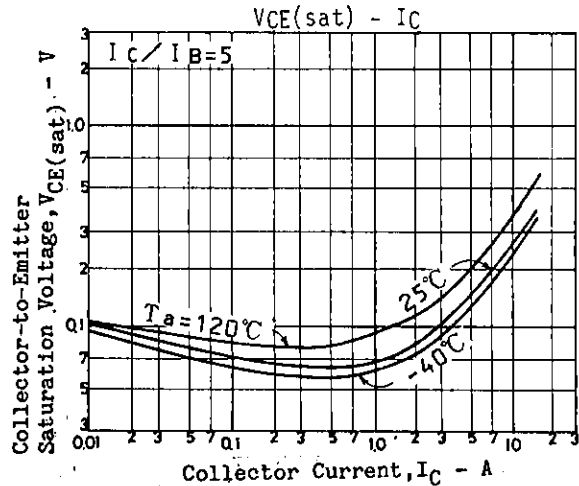
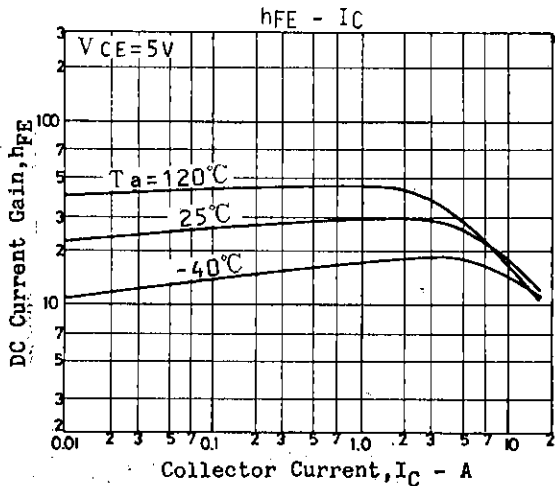
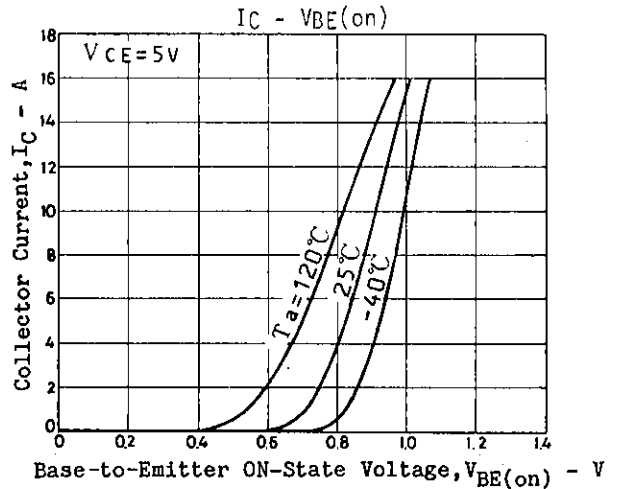
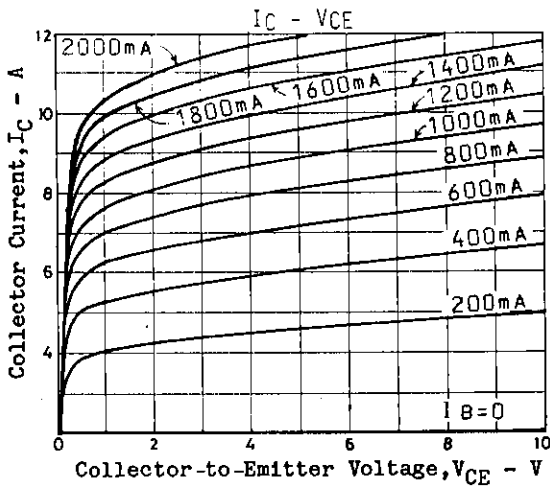
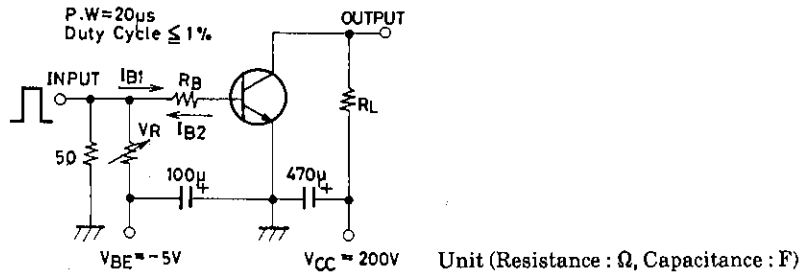
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

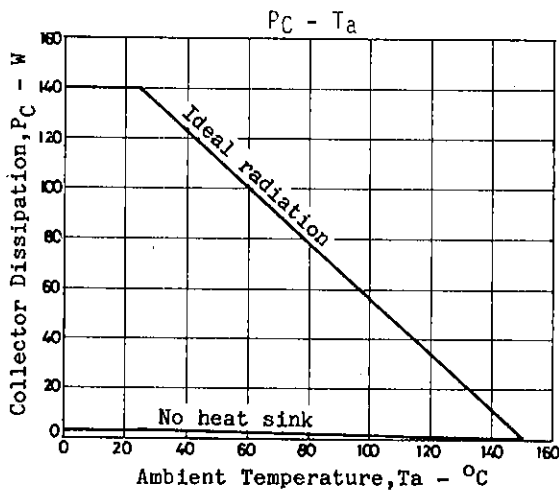
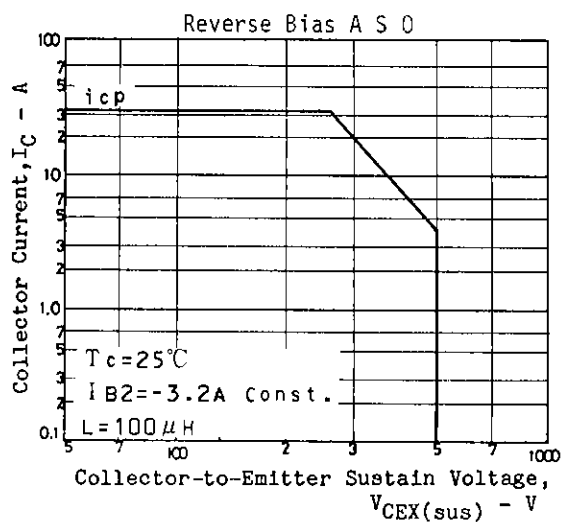
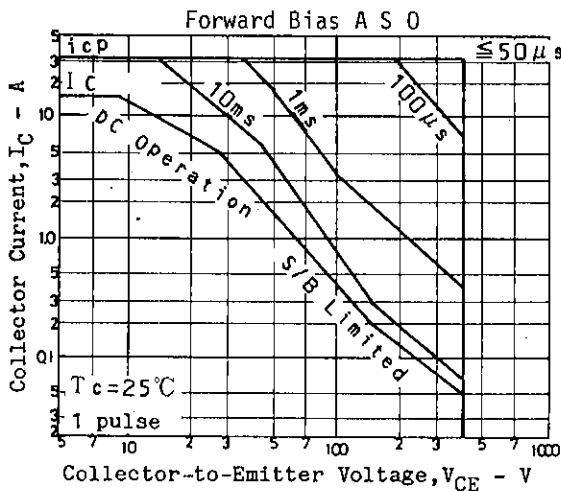
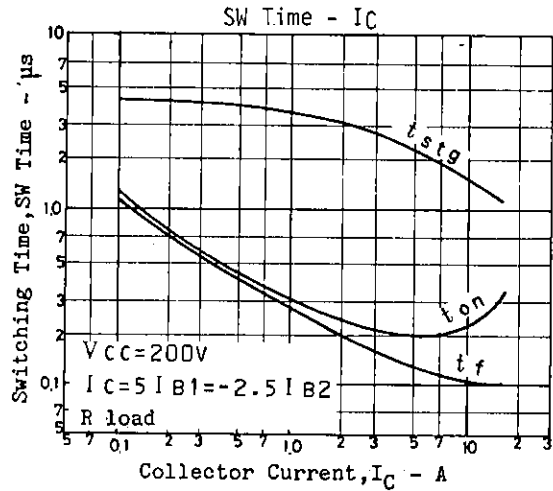
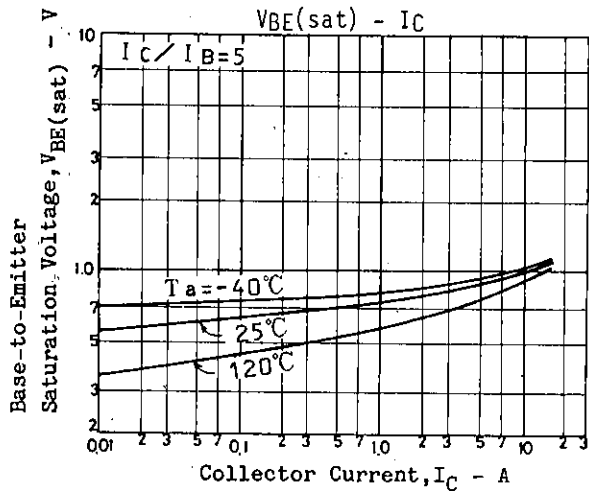
5257TA, TS No.2474-1/3

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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	$V_{(BR)CEO}$	$I_C=10mA, R_{BE}=\infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=8A, I_{B1}=0.8A,$ $I_{B2}=-3.2A, L=200\mu H,$ clamped	400			V
Turn-on Time	t_{on}	$I_C=12A, I_{B1}=2.4A,$ $I_{B2}=-4.8A, R_L=16.6ohms$ $V_{CC}=200V$			0.5	μs
Storage Time	t_{stg}	$I_C=12A, I_{B1}=2.4A,$ $I_{B2}=-4.8A, R_L=16.6ohms,$ $V_{CC}=200V$			2.5	μs
Fall Time	t_f	$I_C=12A, I_{B1}=2.4A,$ $I_{B2}=-4.8A, R_L=16.6ohms,$ $V_{CC}=200V$			0.3	μs

Switching Time Test Circuit





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