

SANYO

No.2471A

2SC4106

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 $T_a=25^\circ\text{C}$

Absolute Maximum Ratings at Ta=25°C				unit	
Collector-to-Base Voltage	V _{CBO}	500		V	
Collector-to-Emitter Voltage	V _{CEO}	400		V	
Emitter-to-Base Voltage	V _{EB0}	7		V	
Collector Current	I _C	7		A	
Peak Collector Current	i _{cp}	PW≤300μs,duty cycle≤10%		14	A
Base Current	I _B	3		A	
Collector Dissipation	P _C	1.75		W	
		Tc=25°C		50	W
Junction Temperature	T _j	150		°C	
Storage Temperature	T _{stg}	-55 to +150		°C	

Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=400\text{V}, I_E=0$			10	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=0.8\text{A}$	15*		50*	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=4\text{A}$	10			
	$h_{FE(3)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	10			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=4\text{A}, I_B=0.8\text{A}$			0.8	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=4\text{A}, I_B=0.8\text{A}$			1.5	V
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=0.8\text{A}$		20		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		80		pF

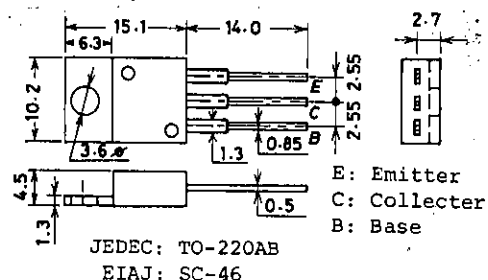
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*: The h_{FE1} of the 2SC4106 is classified as follows. When specifying the h_{FE1} rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2010A

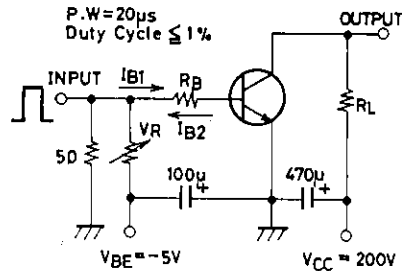
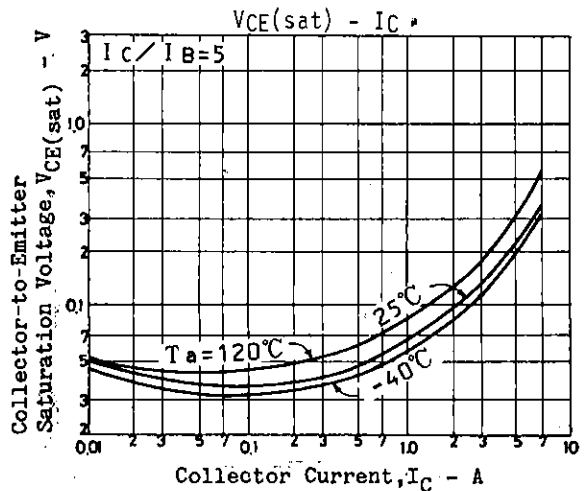
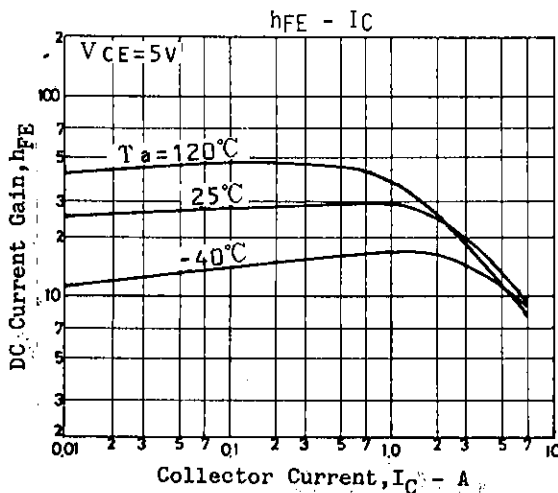
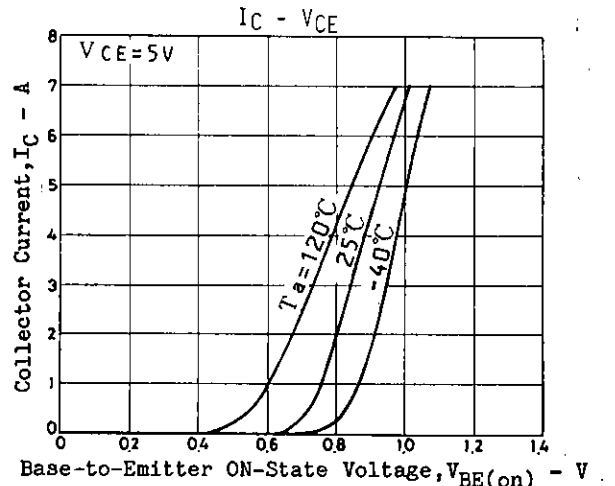
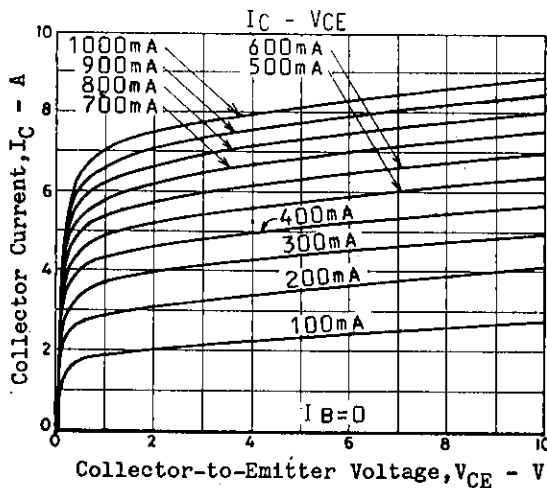
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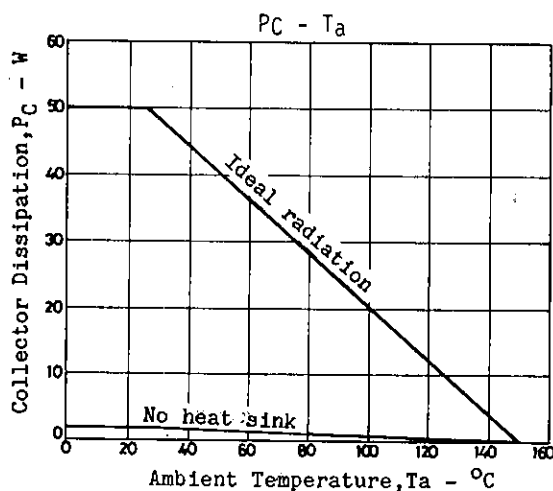
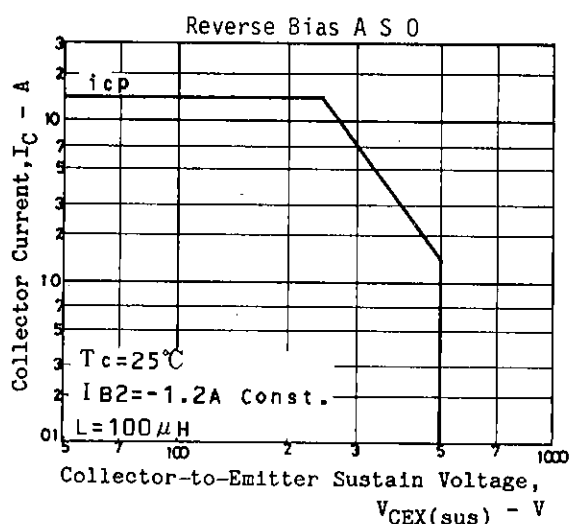
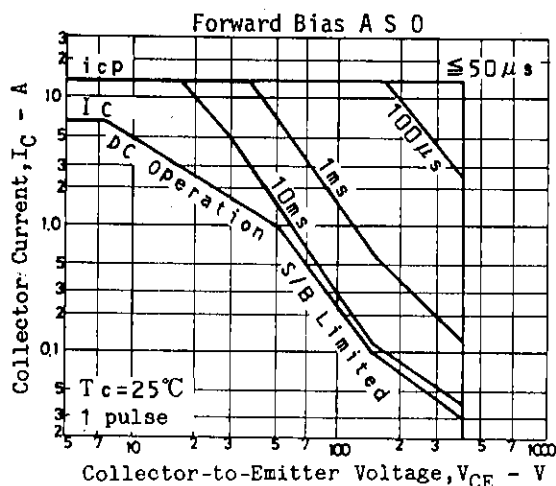
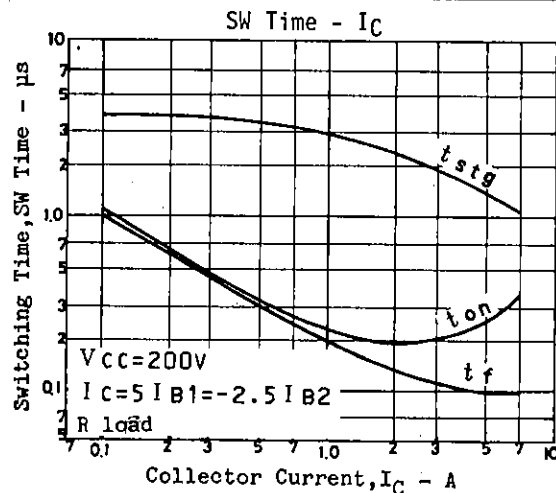
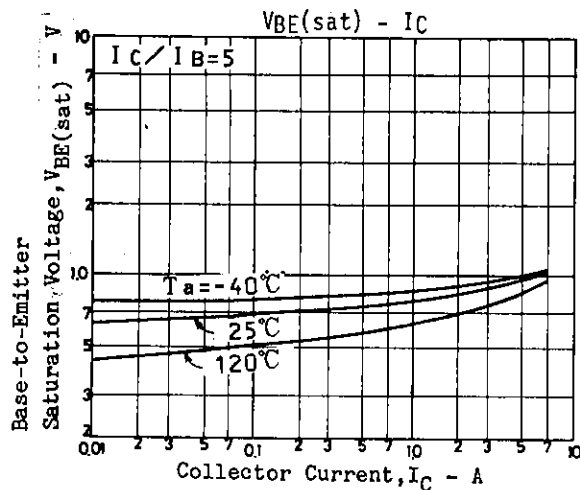


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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	500			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 3\text{A}, I_{B1} = -0.3\text{A},$ $I_{B2} = -1.2\text{A}, L = 1\text{mH}, \text{clamped}$	400			V
Turn-on Time	t_{on}	$I_C = 5\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -2\text{A}, R_L = 40\text{ohms},$ $V_{CC} = 200\text{V}$			0.5	μs
Storage Time	t_{stg}	$I_C = 5\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -2\text{A}, R_L = 40\text{ohms},$ $V_{CC} = 200\text{V}$			2.5	μs
Fall Time	t_f	$I_C = 5\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -2\text{A}, R_L = 40\text{ohms},$ $V_{CC} = 200\text{V}$			0.3	μs

Switching Time Test Circuit

Unit (Resistance : Ω , Capacitance : F)



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