

SANYO

No.2475B

2SC4110

NPN Triple Diffused Planar 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 $T_a=25^\circ\text{C}$

			unit	
Collector-to-Base Voltage	V_{CBO}	500	V	
Collector-to-Emitter Voltage	V_{CEO}	400	V	
Emitter-to-Base Voltage	V_{EBO}	7	V	
Collector Current	I_C	25	A	
Peak Collector Current	i_{cp}	$PW \leq 300\mu s, \text{duty cycle} \leq 10\%$	40	A
Base Current	I_B	8	A	
Collector Dissipation	P_C	2.5	W	
		$T_c=25^{\circ}C$	160	W
Junction Temperature	T_j	150	$^{\circ}C$	
Storage Temperature	T_{stg}	-55 to +150	$^{\circ}C$	

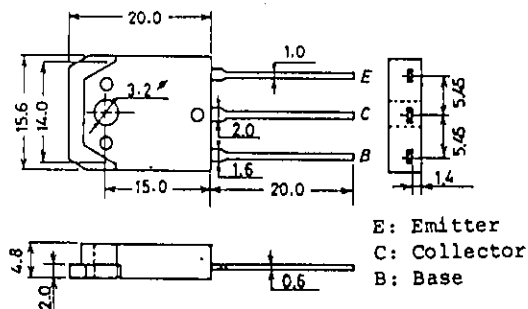
Electrical Characteristics at $T_a=25^\circ\text{C}$

			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	$h_{FE}(1)$	$V_{CE}=5\text{V}, I_C=3.2\text{A}$	15*		50*	
	$h_{FE}(2)$	$V_{CE}=5\text{V}, I_C=16\text{A}$	10			
	$h_{FE}(3)$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	10			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=16\text{A}, I_B=3.2\text{A}$			0.8	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=16\text{A}, I_B=3.2\text{A}$			1.5	V
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=3.2\text{A}$		20		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		300		pF

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*: The h_{FE1} of the 2SC4110 is classified as follows. When specifying the h_{FE1} rank, specify two ranks or more in principle.

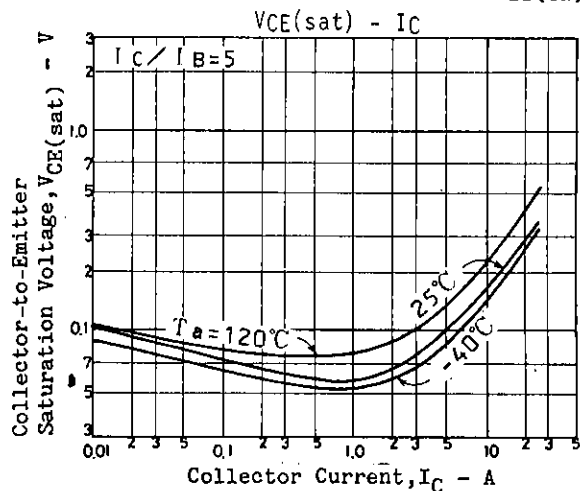
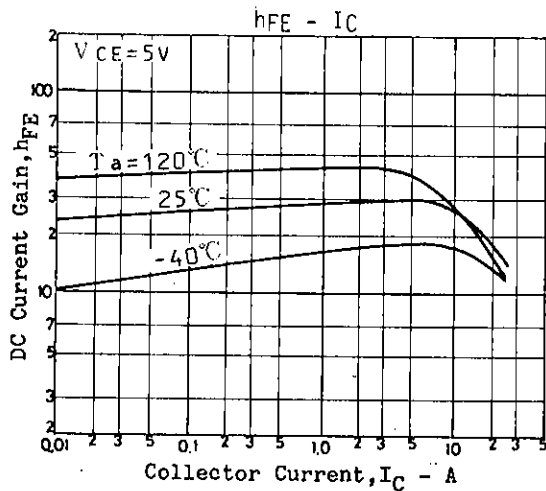
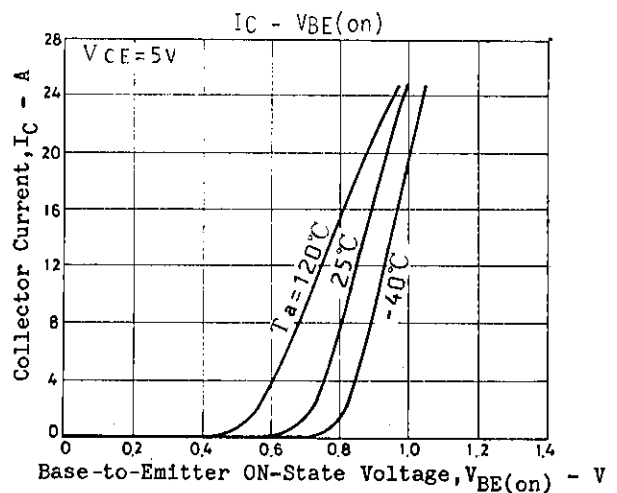
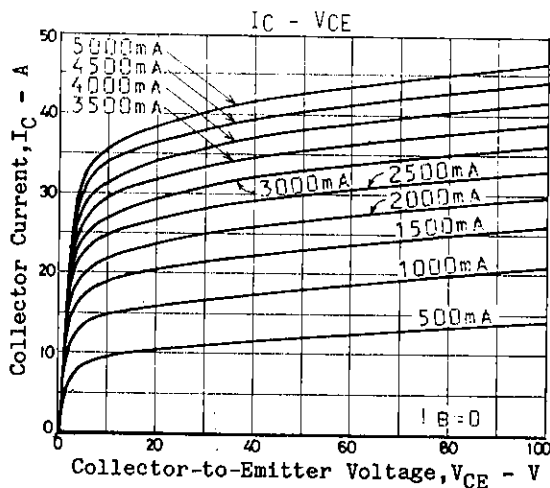
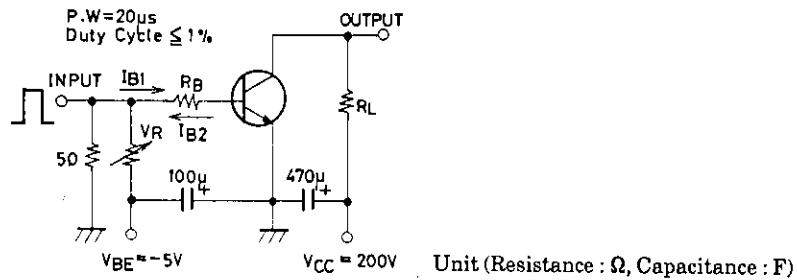
15	L	30	20	M	40	30	N	50
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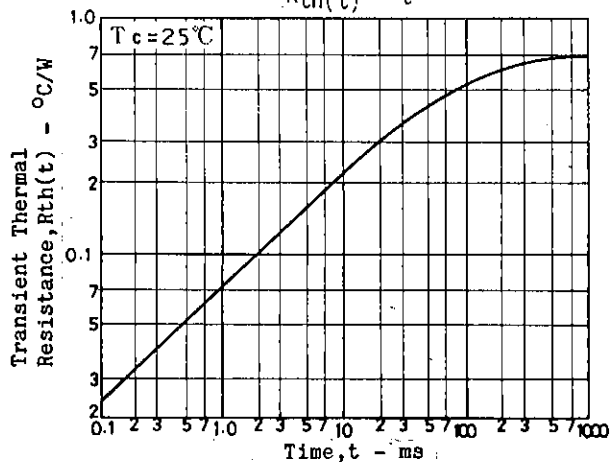
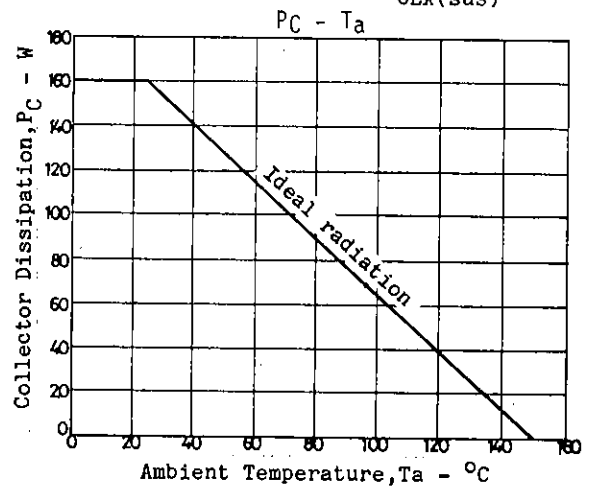
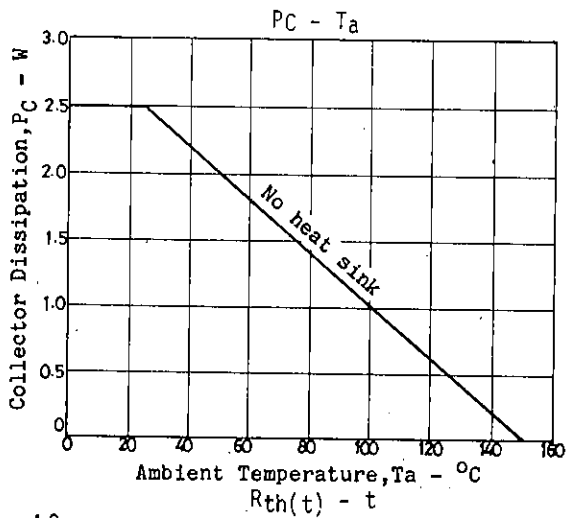
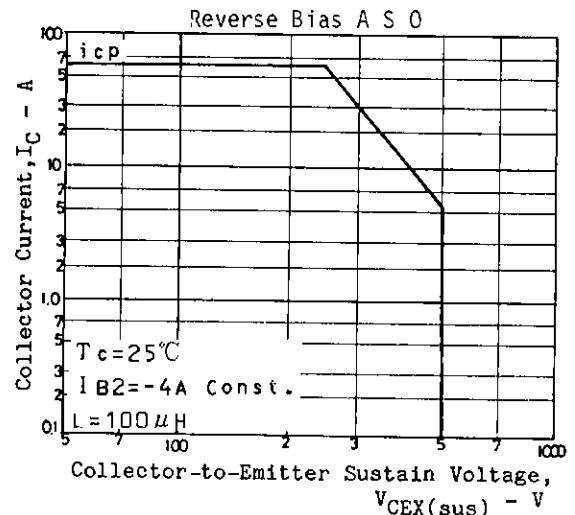
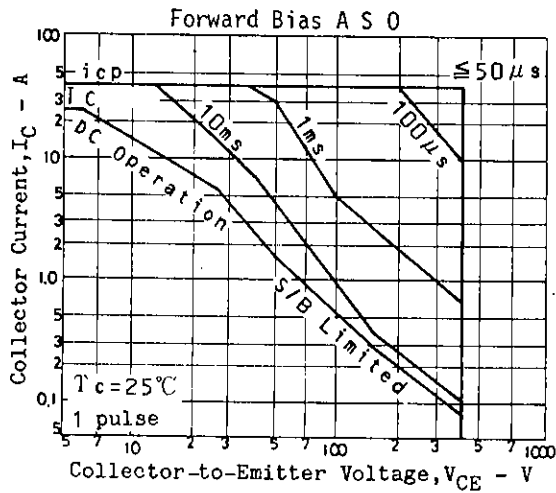
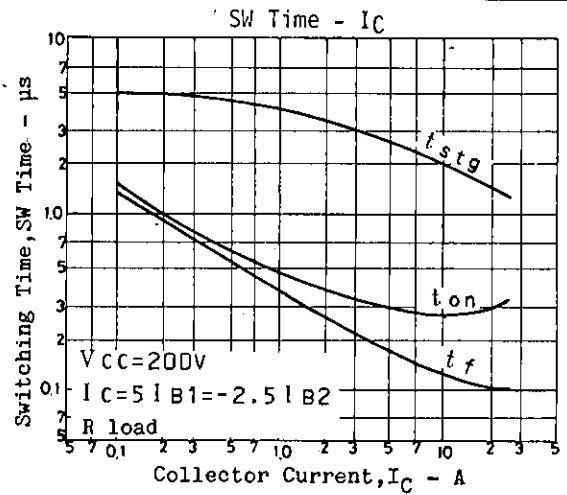
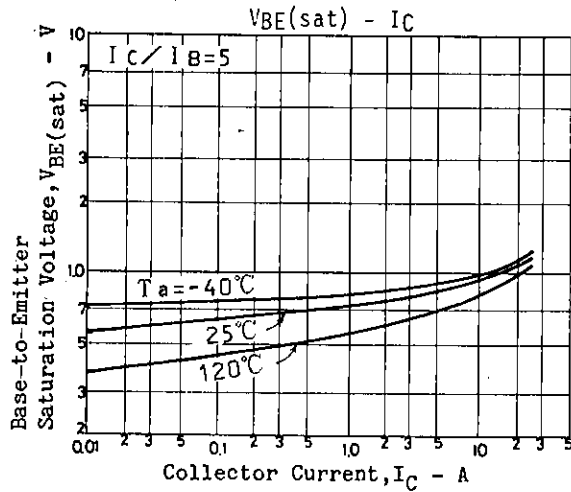
Package Dimensions 2022
(unit:mm)

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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	$V_{(BR)CEO}$	$I_C = 10\text{mA}, R_{BE} = \infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 10\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -4\text{A}, L = 200\mu\text{H},$ clamped	400			V
Turn-on Time	t_{on}	$I_C = 20\text{A}, I_{B1} = 4\text{A},$ $I_{B2} = -8\text{A}, R_L = 10\text{ohms},$ $V_{CC} = 200\text{V}$		0.5		μs
Storage Time	t_{stg}	$I_C = 20\text{A}, I_{B1} = 4\text{A},$ $I_{B2} = -8\text{A}, R_L = 10\text{ohms},$ $V_{CC} = 200\text{V}$		2.5		μs
Fall Time	t_f	$I_C = 20\text{A}, I_{B1} = 4\text{A},$ $I_{B2} = -8\text{A}, R_L = 10\text{ohms},$ $V_{CC} = 200\text{V}$		0.3		μs

Switching Time Test Circuit





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