	No.1572C	<h1 style="margin: 0;">2SC3449</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 and high reliability
- Fast switching speed (t_f : 0.1 μ s typ.)
- Wide ASO
- Adoption of MBIT process

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

			unit
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	7	A
Peak Collector Current	i_{cp} $PW \leq 300\mu\text{s}$, Duty cycle $\leq 10\%$	14	A
Base Current	I_B	3	A
Collector Dissipation	P_C $T_c=25^\circ\text{C}$	80	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

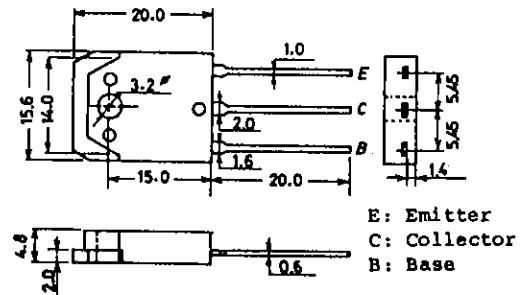
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=500\text{V}, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5\text{V}, I_C=0.6\text{A}$	15*		50*	
		$V_{CE}=5\text{V}, I_C=3\text{A}$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=0.6\text{A}$		18		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		80		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.6\text{A}$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=3\text{A}, I_B=0.6\text{A}$			1.5	V
C-B Breakdown Voltage	$V(BR)_{CBO}$	$I_C=1\text{mA}, I_E=0$	800			V
C-E Breakdown Voltage	$V(BR)_{CEO}$	$I_C=5\text{mA}, R_{BE}=\infty$	500			V
E-B Breakdown Voltage	$V(BR)_{EBO}$	$I_E=1\text{mA}, I_C=0$	7			V

*: The $h_{FE}(1)$ of the 2SC3449 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 2022
(unit:mm)

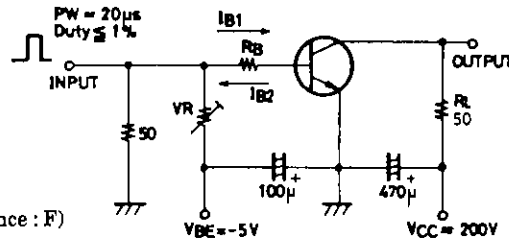


2SC3449

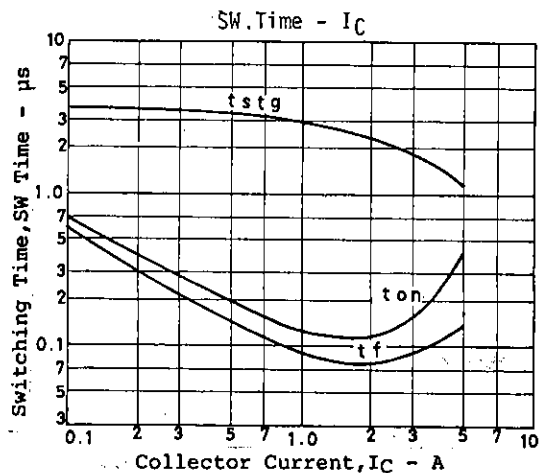
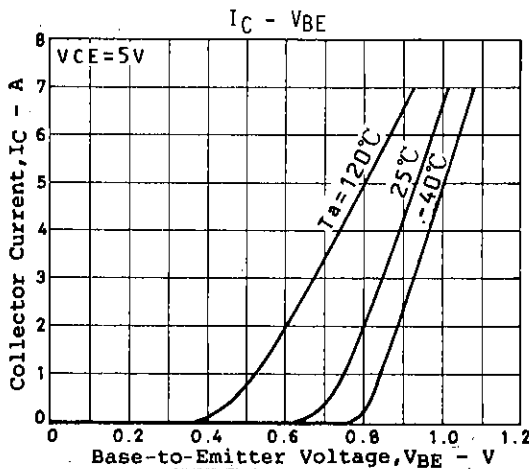
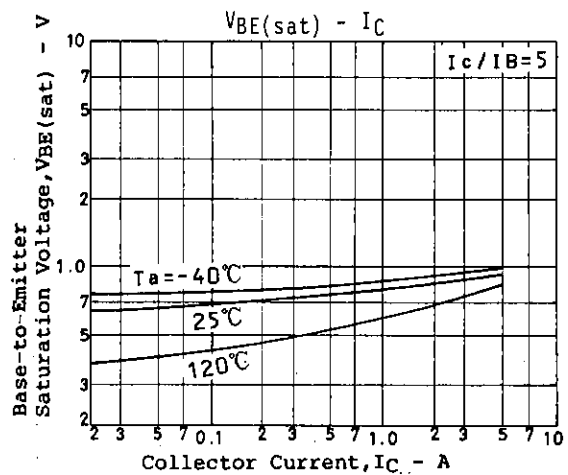
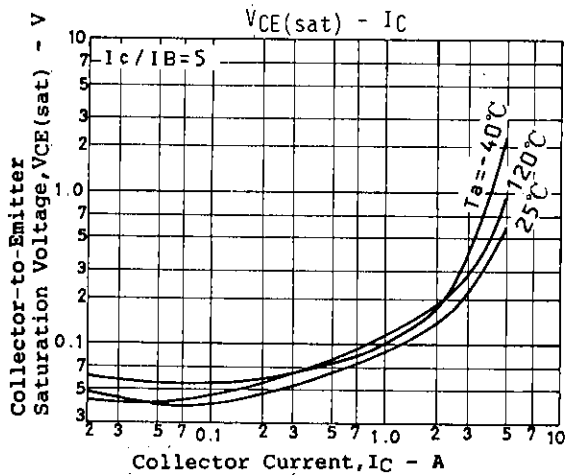
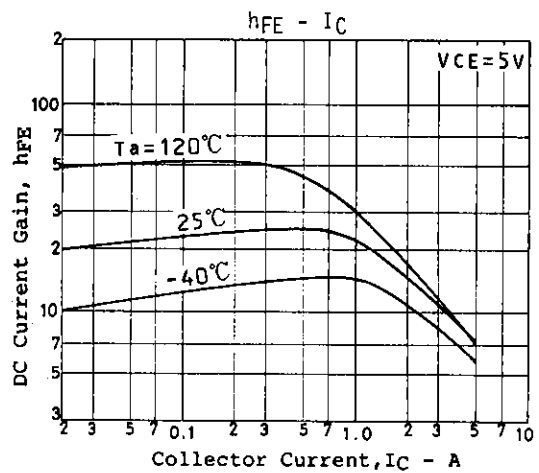
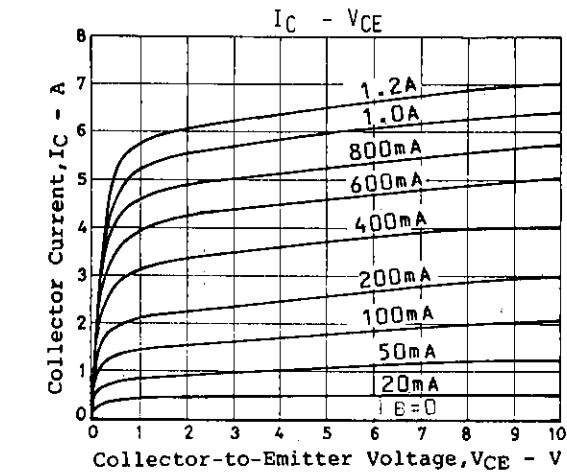
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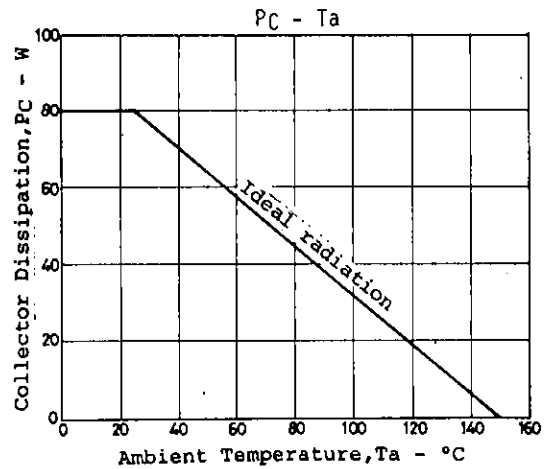
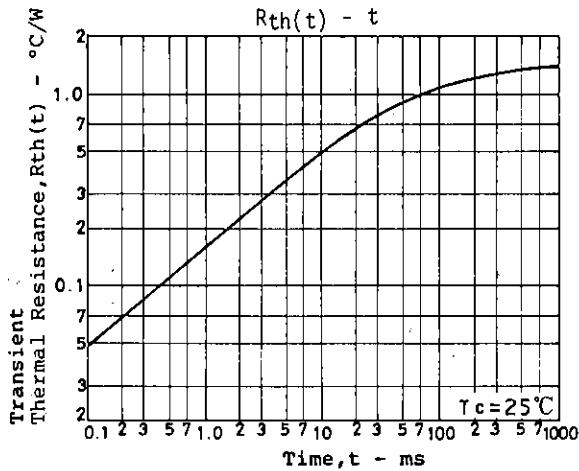
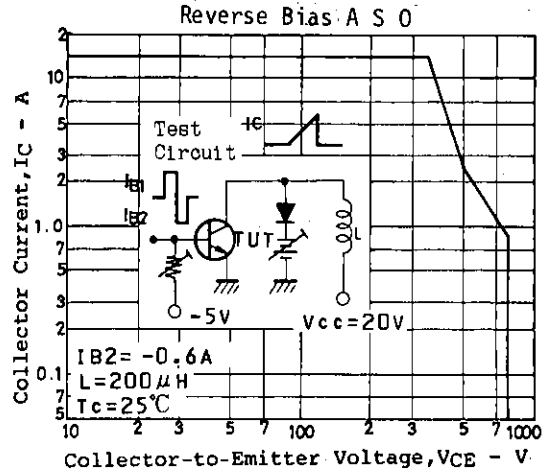
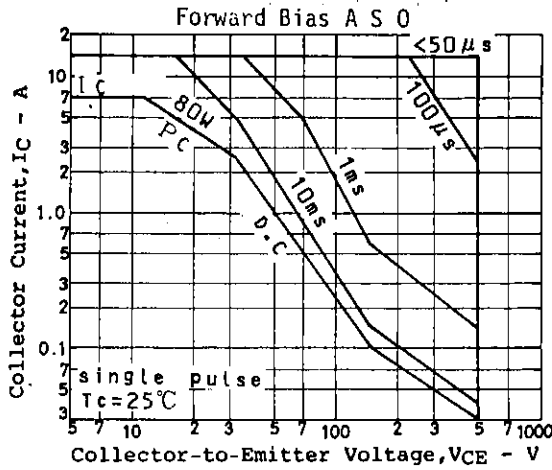
			min	typ	max	unit	
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=2.5A$	500			V	
		$I_{B1}=-I_{B2}=1A,$					
		$L=1mH, \text{clamped}$					
Turn-on Time	t_{on}	}			0.5	μs	
Storage Time	t_{stg}		$V_{CC}=200V,$			3.0	μs
Fall Time	t_f		$5I_{B1}=-2.5I_{B2}=I_C=4A,$			0.3	μs
		$R_L=50ohms$					

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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