

SANYO

No.1068C

2SC3149

NPN Triple Diffused Planar Silicon Transistor

FOR SWITCHING REGULATORS

Features

- . High breakdown voltage ($V_{CBO} \geq 900V$).
- . Fast switching speed.
- . Wide ASO.

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

			unit
Collector-to-Base Voltage	V_{CBO}	900	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	1.5	A
Peak Collector Current	i_{cp}	5	A
		PW \leq 300 μ s, Duty Cycle \leq 10%	
Base Current	I_B	0.8	A
Collector Dissipation	P_C	40	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

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

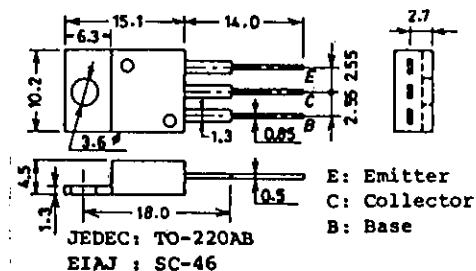
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5V, I_C=0.1A$	10*		40*	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=0.5A$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.1A$		15		MHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1MHz$		30		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=0.75A, I_B=0.15A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=0.75A, I_B=0.15A$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$		900		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$		800		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$		7		V
C-E Sustain Voltage	$V_{CEO(sus)}$	$I_C=1.5A, L=1mH, I_B=0.5A$		800		V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=0.5A, I_{B1}=0.1A$		800		V
	(1)	$I_{B2}=-0.1A, L=5mH, \text{clamped}$				
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=0.25A, I_{B1}=0.05A,$		900		V
	(2)	$I_{B2}=-0.05A, L=10mH, \text{clamped}$				

Continued on next page.

*: The $h_{FE}(1)$ of the 2SC3149 is classified as follows. When specifying the $h_{FE}(1)$ rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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Package Dimensions 2010A
(unit:mm)

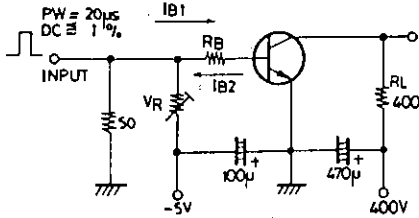


E: Emitter
C: Collector
B: Base

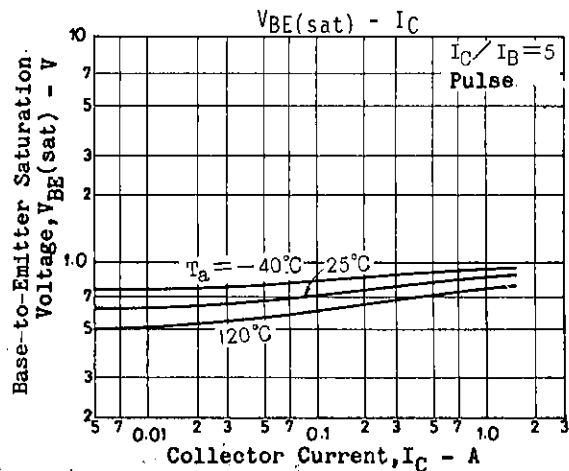
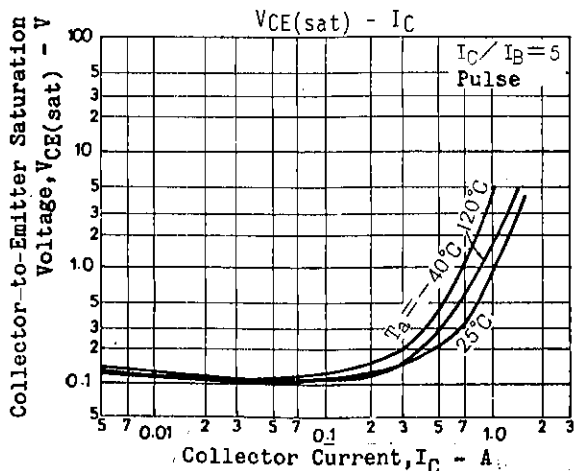
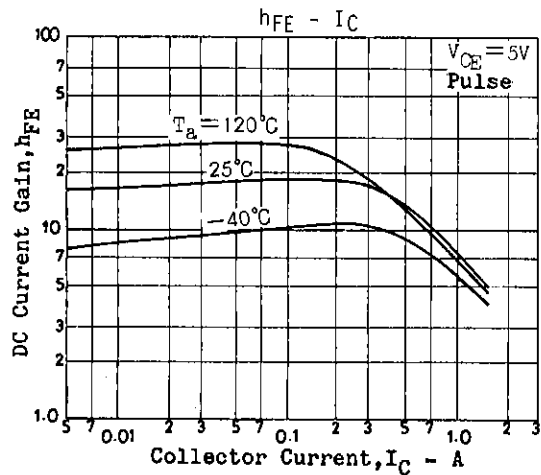
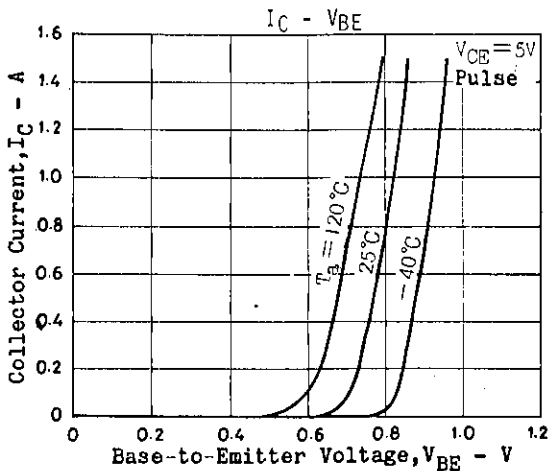
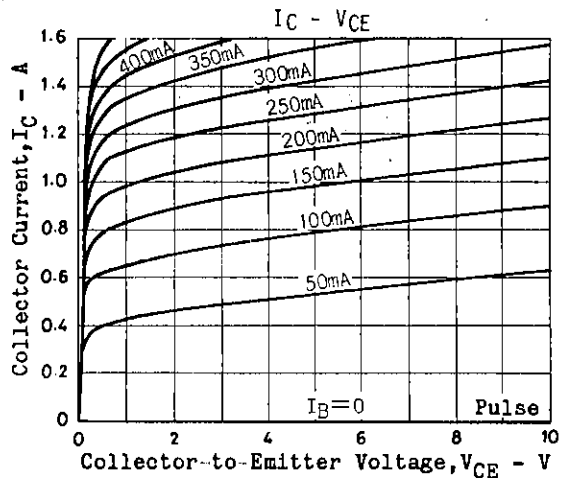
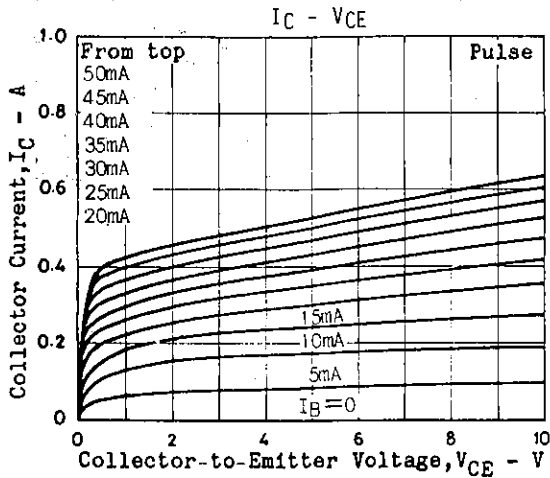
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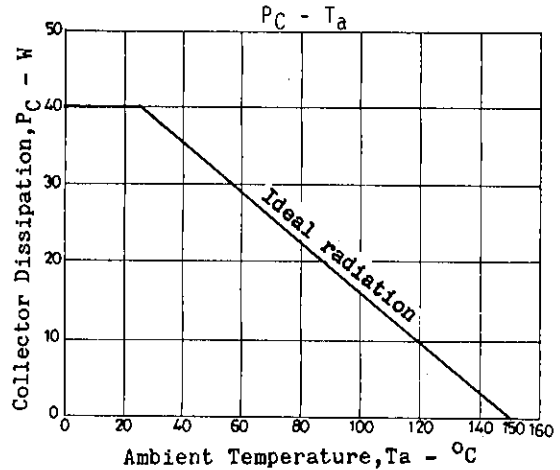
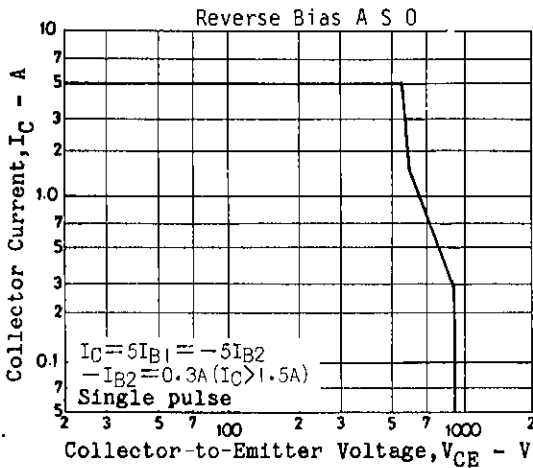
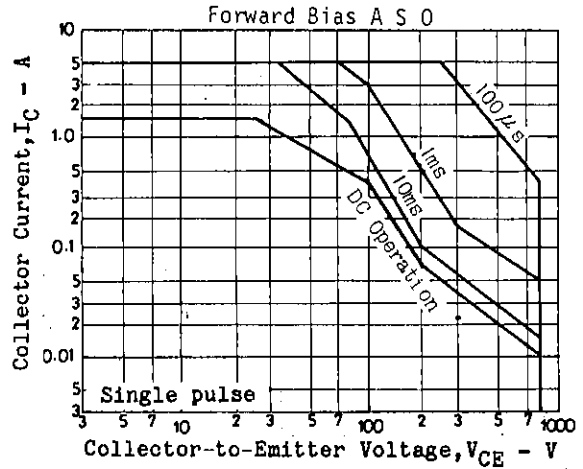
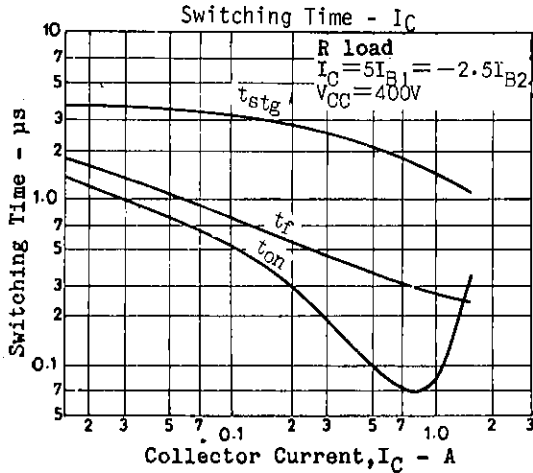
			min	typ	max	unit
Turn-ON Time	t_{on}	$(I_C=1A, I_{B1}=0.2A, I_{B2}=-0.4A,$ $R_L=400\Omega, V_{CC}=400V$			1.0	μs
Storage Time	t_{stg}	" "			3.0	μs
Fall Time	t_f	" "			0.7	μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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