

SANYO	No. 1968A	2SC3749
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
- . Micaless package facilitating mounting

Absolute Maximum Ratings at Ta=25°C

				unit
Collector-to-Base Voltage	V _{CB0}	800		V
Collector-to-Emitter Voltage	V _{CEO}	500		V
Emitter-to-Base Voltage	V _{EBO}	7		V
Collector Current	I _C	3		A
Peak Collector Current	i _{cp}	6	PW ≤ 300μs, Duty cycle ≤ 10%	A
Base Current	I _B	1		A
Collector Dissipation	P _C	25	Tc=25°C	W
Junction Temperature	T _J	150		°C
Storage Temperature	T _{stg}	-55 to +150		°C

Electrical Characteristics at Ta=25°C

Collector Cutoff Current	I _{CB0}	V _{CB} =500V, 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 =0.3A	15*		50*
	f _{FE(2)}	V _{CE} =5V, I _C =1.5A	8		
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =0.3A		18	MHz
Output Capacitance	c _{ob}	V _{CB} =10V, f=1MHz		50	pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =1.5A, I _B =0.3A		1.0	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =1.5A, I _B =0.3A		1.5	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	800		V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =5mA, R _{BE} =∞	500		V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	7		V

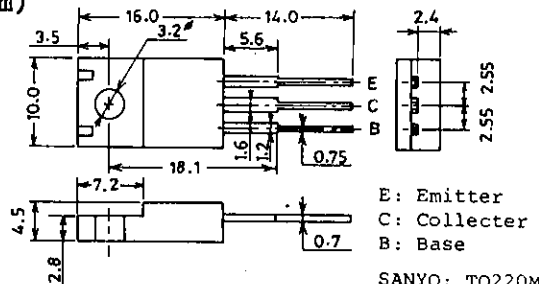
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*: The h_{FE(1)} of the 2SC3749 is classified as follows. When specifying the h_{FE(1)} rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2041

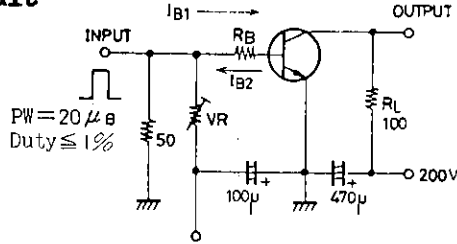
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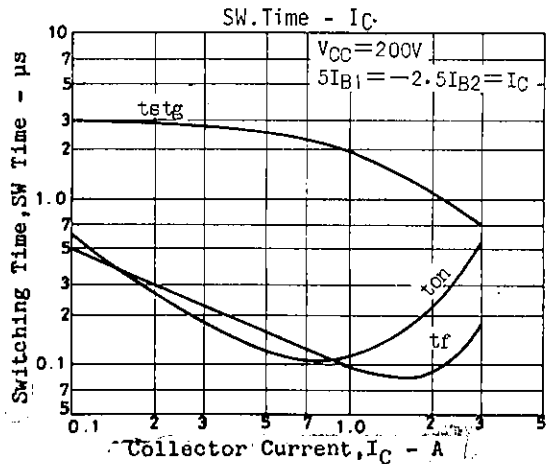
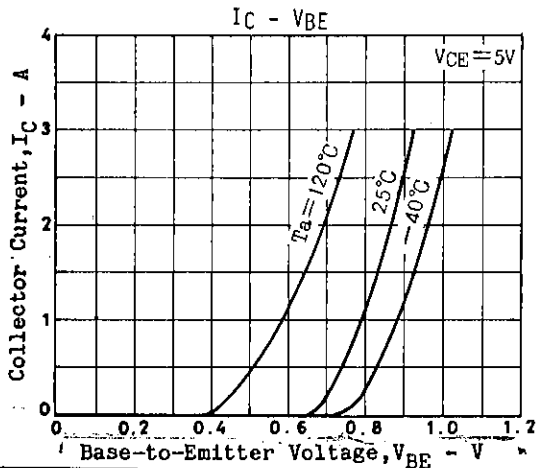
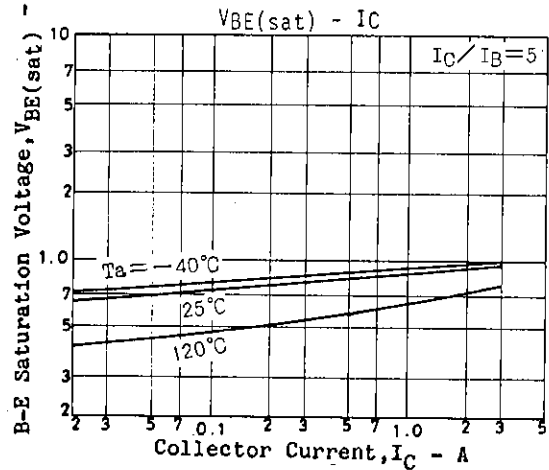
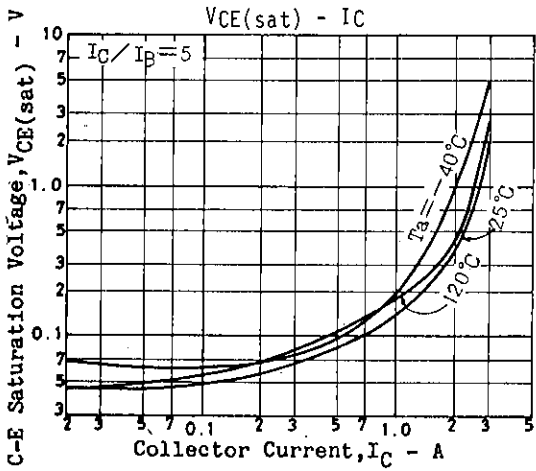
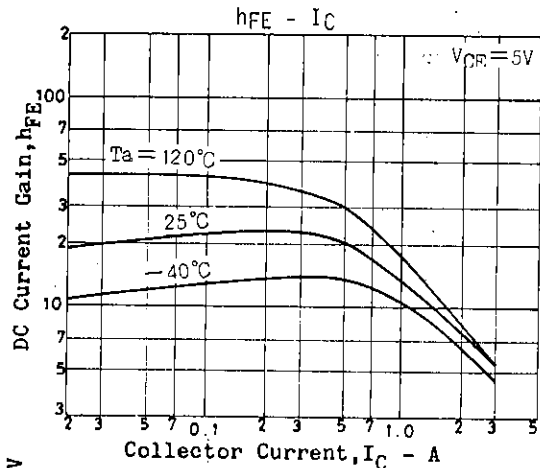
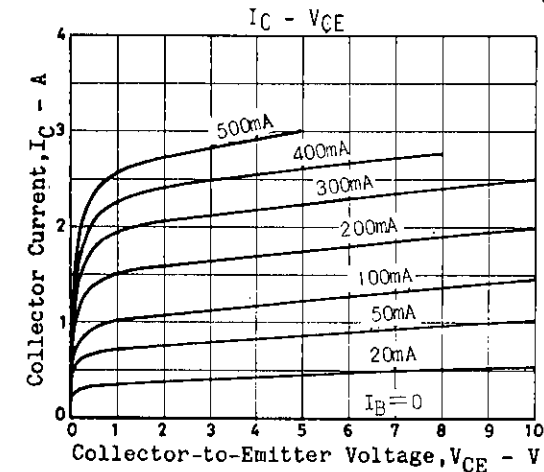
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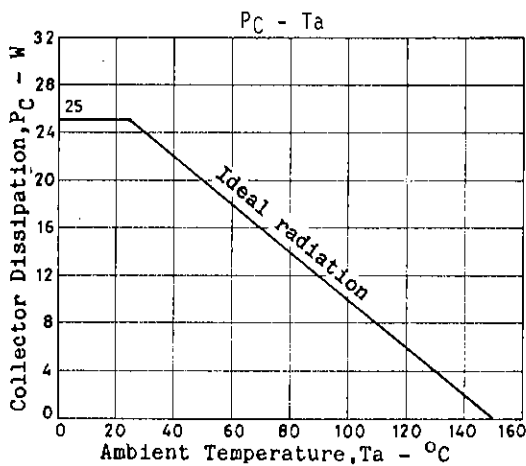
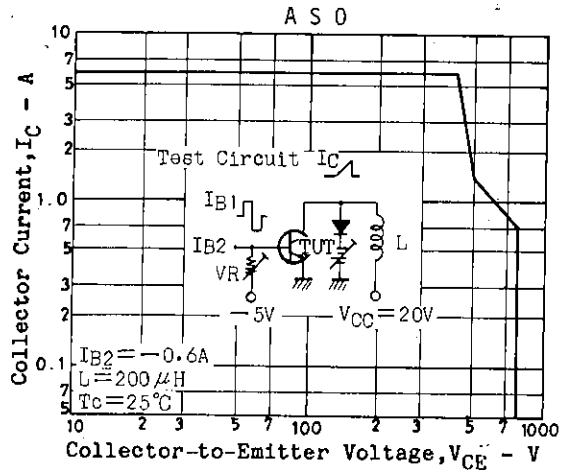
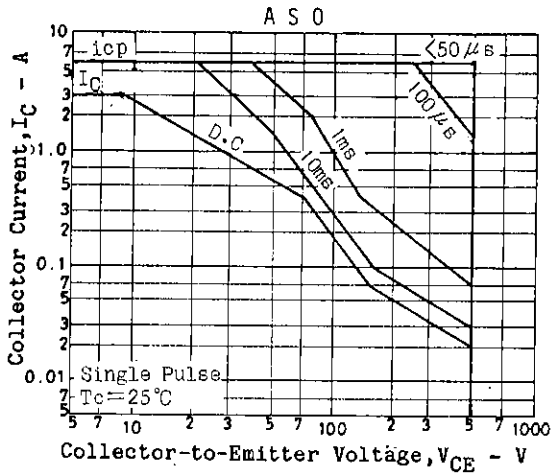
	$V_{CEX(sus)}$	$I_C=1.5A,$ $I_{B1}=-I_{B2}=0.6A,$ $L=2mH, \text{clamped}$	min	typ	max	unit
Collector-to-Emitter Sustain Voltage			500			V
Turn-on Time	t_{on}	$V_{CC}=200V,$ $5I_{B1}=-2.5I_{B2}=I_C=2A,$ $R_L=100ohms$		0.5		μs
Storage Time	t_{stg}			3.0		μs
Fall Time	t_f			0.3		μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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