

SANYO

No.1971A

2SC3752

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 _{CBO}	1100	V
Collector-to-Emitter Voltage	V _{CEO}	800	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	3	A
Peak Collector Current	i _{cp}	10	A
Base Current	I _B	1.5	A
Collector Dissipation	P _C	30	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

PW ≤ 300μs, Duty cycle ≤ 10%
Tc = 25°C

Electrical Characteristics at Ta=25°C

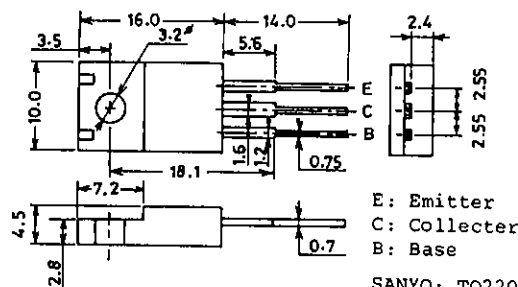
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} =800V, I _E =0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} =5V, I _C =0.2A	10*		40*	
	h _{FE} (2)	V _{CE} =5V, I _C =1A	8			
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =0.2A		15		MHz
Output Capacitance	c _{ob}	V _{CB} =10V, f=1MHz		60		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =1.5A, I _B =0.3A			2.0	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	1100			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =5mA, R _{BE} =∞	800			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	7			V

Continued on next page.

*: The h_{FE}(1) of the 2SC3752 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 2041 (unit:mm)



Collector-to-Emitter Sustain Voltage

$V_{CEX(sus)}$ $I_C=1.5A$,
 $I_{B1}=-I_{B2}=0.3A$,
 $L=2mH$, clamped
 $V_{CC}=400V$,
 $5I_{B1}=-2.5I_{B2}=I_C=2A$,
 $R_L=200ohms$

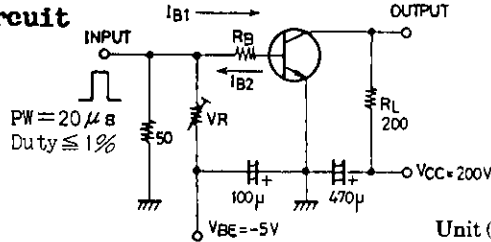
min typ max unit
 800 V

Turn-on Time
 Storage Time
 Fall Time

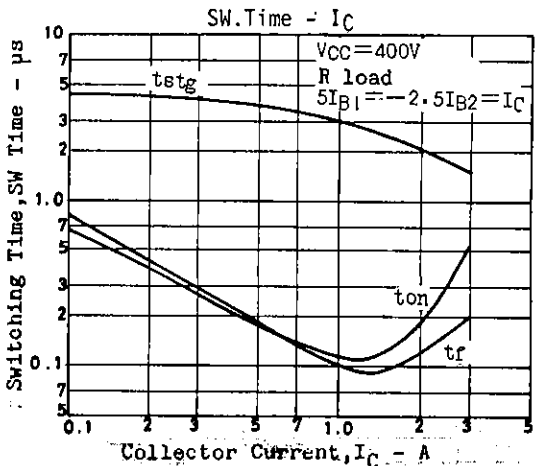
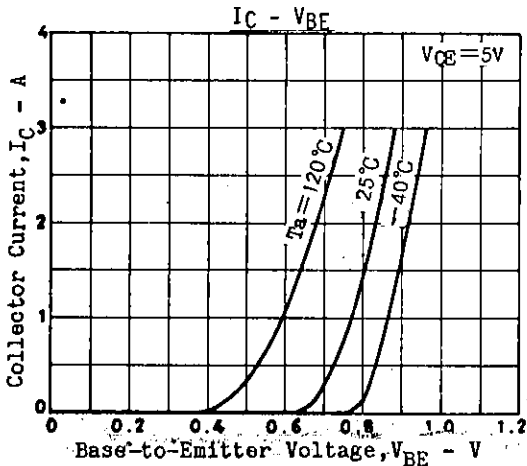
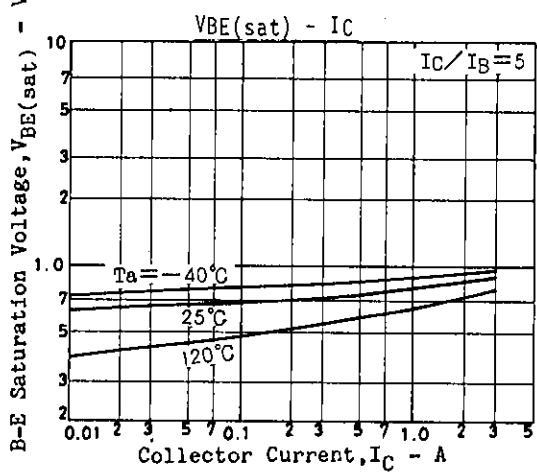
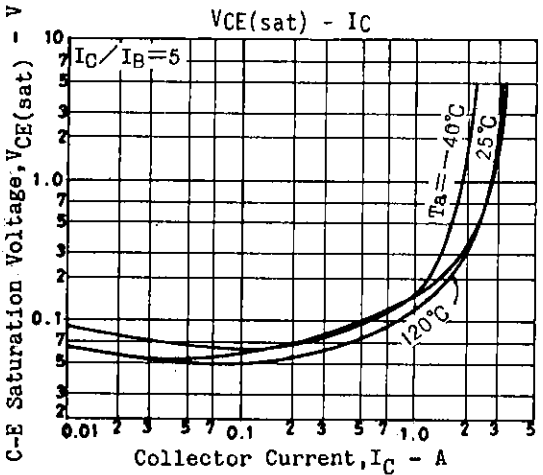
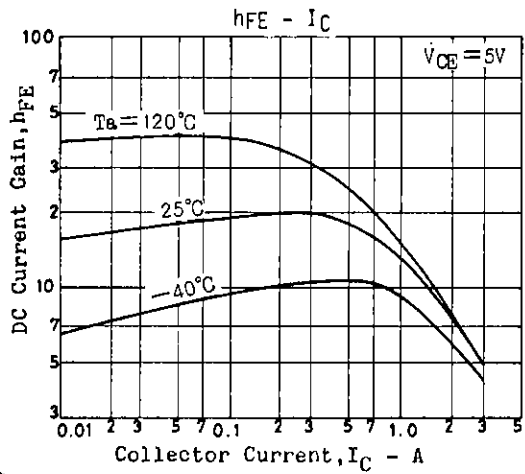
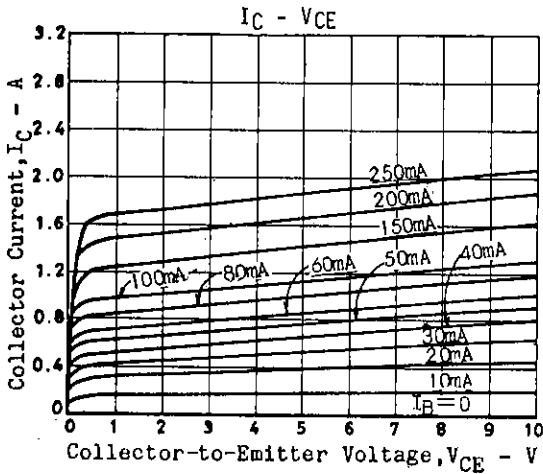
t_{on}
 t_{stg}
 t_f

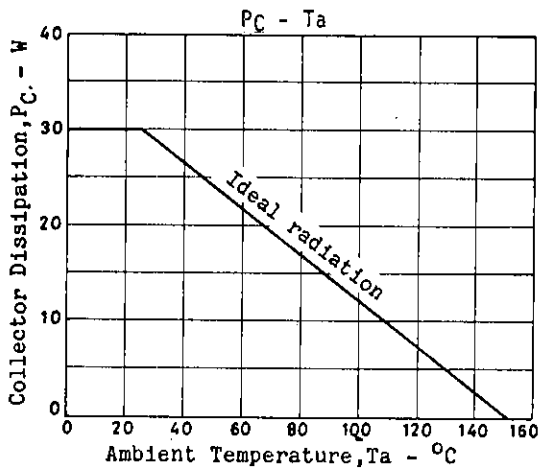
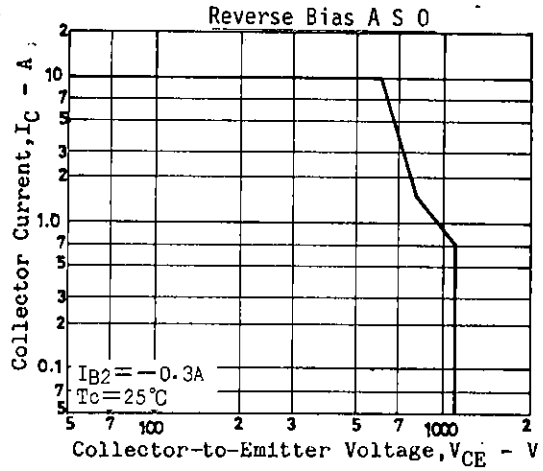
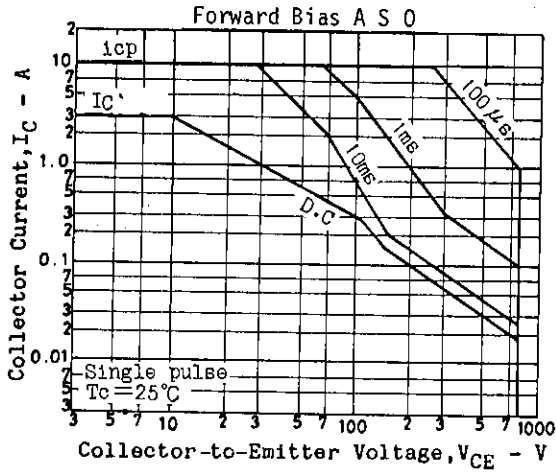
0.5 μs
 3.0 μs
 0.3 μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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