

SANYO

No. 1579D

2SC3456

NPN Triple Diffused Planar Silicon Transistor
FOR SWITCHING REGULATORS

Features

- . High breakdown voltage and high reliability.
- . Fast switching speed (tf: 0.1µs typ).
- . Wide ASO.
- . Adoption of MBIT process.

Absolute Maximum Ratings at Ta=25°C

			unit
Collector-to-Base Voltage	V _{CB0}	1100	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
Base Current	I _B	0.8	A
Collector Dissipation	P _C	40	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

T_c=25°C
P_W≤300µs, Duty Cycle≤10%

Electrical Characteristics at Ta=25°C

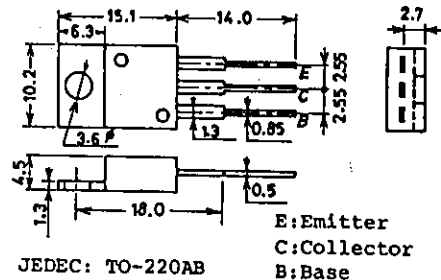
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =800V, I _E =0			10	µA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	µA
DC Current Gain	h _{FE} (1)	V _{CE} =5V, I _C =0.1A	10*		40*	
	h _{FE} (2)	V _{CE} =5V, I _C =0.5A	8			
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =0.1A		15		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		35		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.75A, I _B =0.15A			2.0	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =0.75A, I _B =0.15A			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 2SC3456 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)



JEDEC: TO-220AB
EIAJ: SC-46

Continued from preceding page.

Collector-to-Emitter Sustain Voltage $V_{CEX(sus)}$

$I_C=0.75A$
 $I_{B1}=-I_{B2}=0.15A$,
 $L=5mH$, clamped

min typ max unit
 800 V

Turn-on Time t_{on}

Fall Time t_{stg}

Storage Time t_f

t_{on}

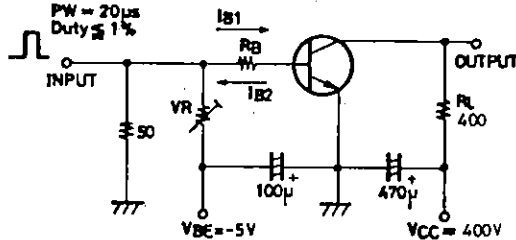
t_{stg}

t_f

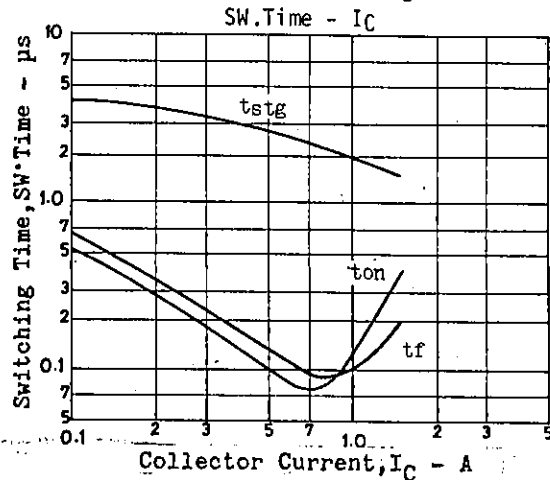
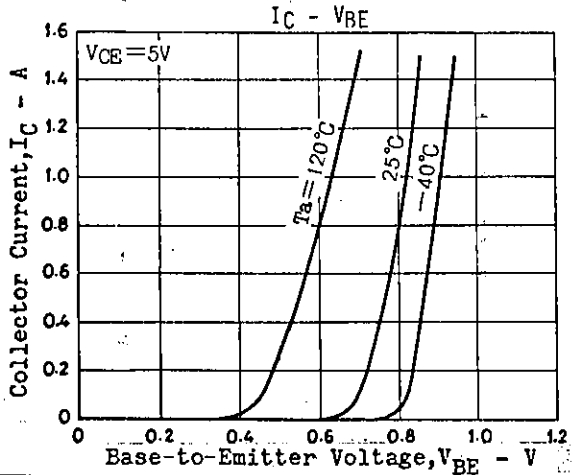
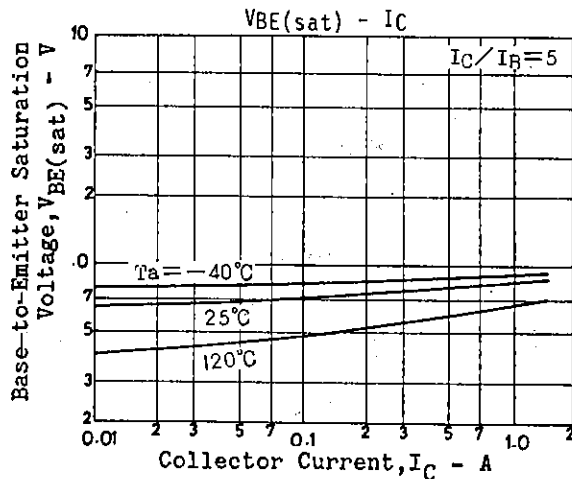
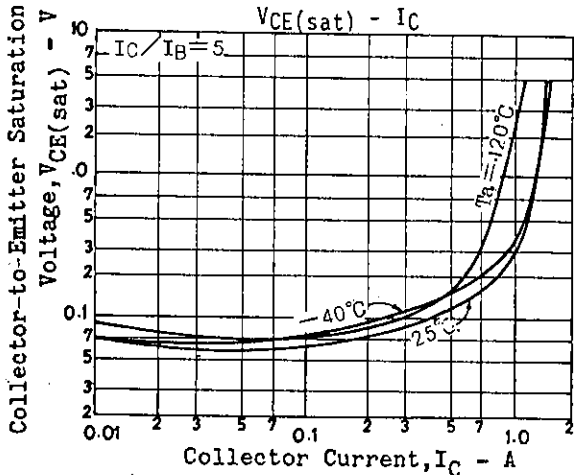
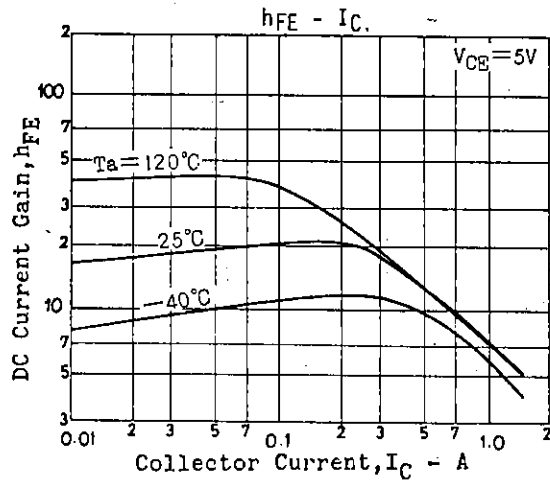
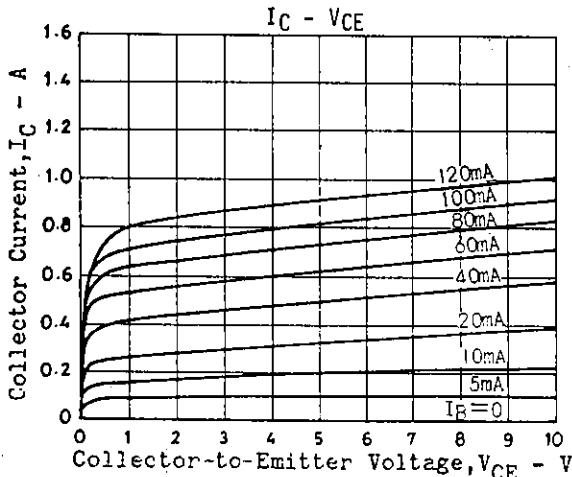
$V_{CC}=400V$,
 $5I_{B1}=-2.5I_{B2}=I_C=1A$
 $R_L=400ohms$

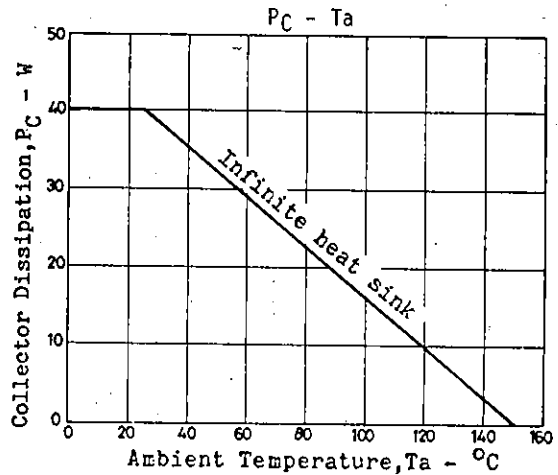
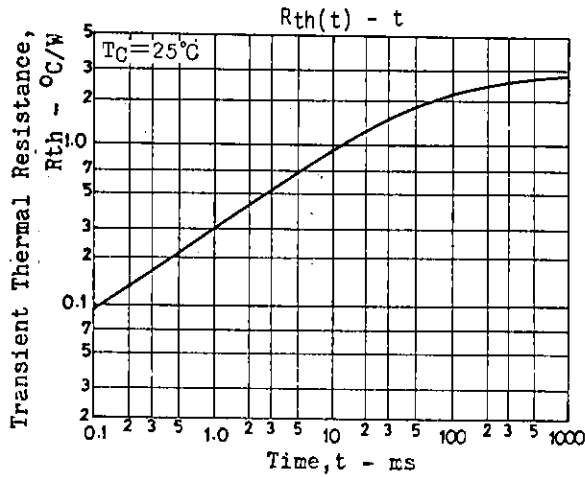
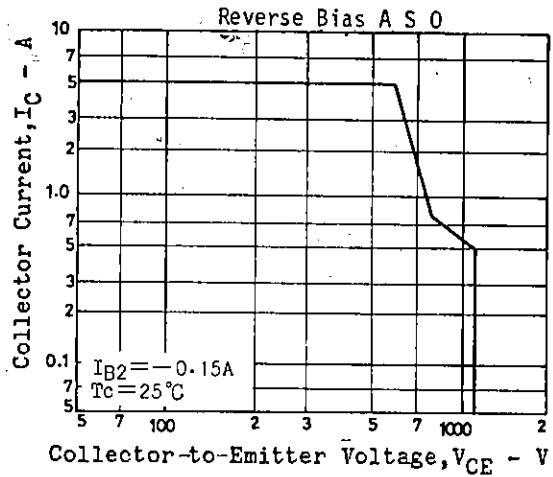
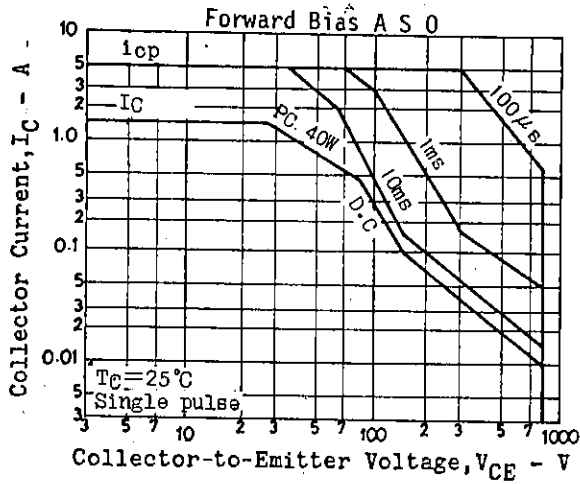
0.5 μs
 3.0 μs
 0.3 μs

Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)





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