

SANYO

No. 1580C

2SC3457

NPN Triple Diffused planar Type 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 _{CE0}	800	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	3	A
Peak Collector Current	i _{cp}	PW ₂ ≤300µs, Duty Cycle≤10% 10 A	
Base Current	I _B	1.5	A
Collector Dissipation	P _C	Tc=25°C 50 W	
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150 °C	

Electrical Characteristics at Ta=25°C

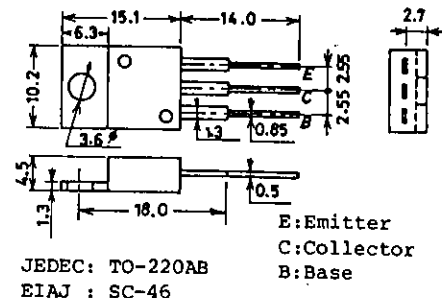
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =800V, I _E =0			10	µA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	µA
DC Current Gain	h _{FE(1)}	V _{CE} =5V, I _C =0.2A	10*		40*	
	h _{FE(2)}	V _{CE} =5V, I _C =1A	8			
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =0.2A		15		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 2SC3457 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)



Continued from preceding page.

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

$I_C = 1.5A$
 $I_{B1} = -I_{B2} = 0.3A$
 $L = 2mH, clamped$

min typ max unit
 800 V

Turn-on Time t_{on}

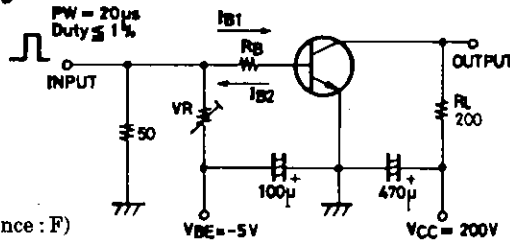
Fall Time t_{stg}

Storage Time t_f

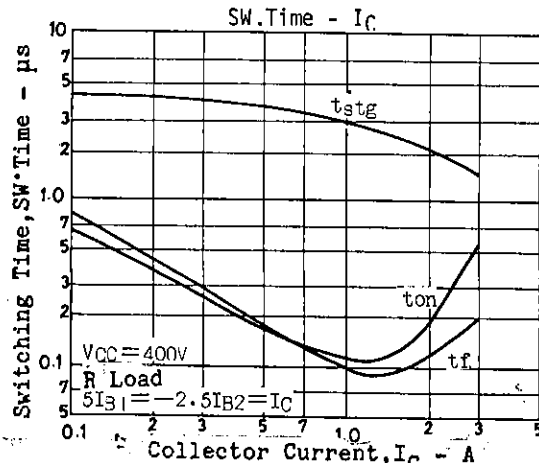
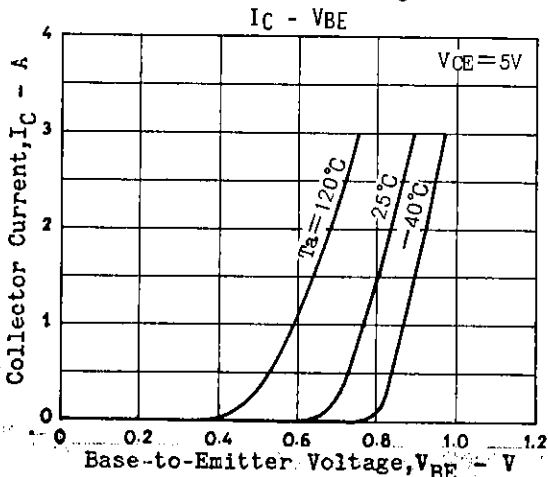
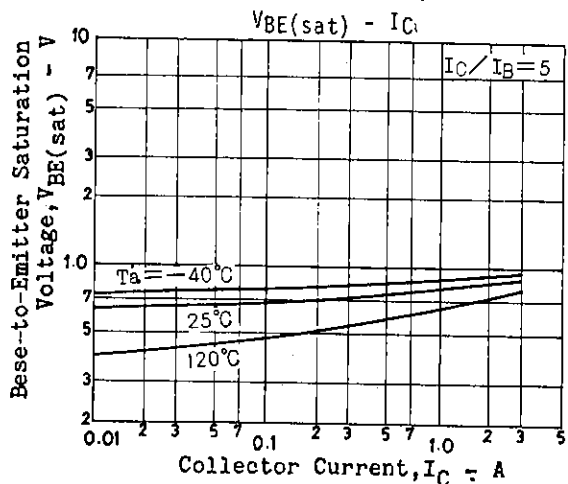
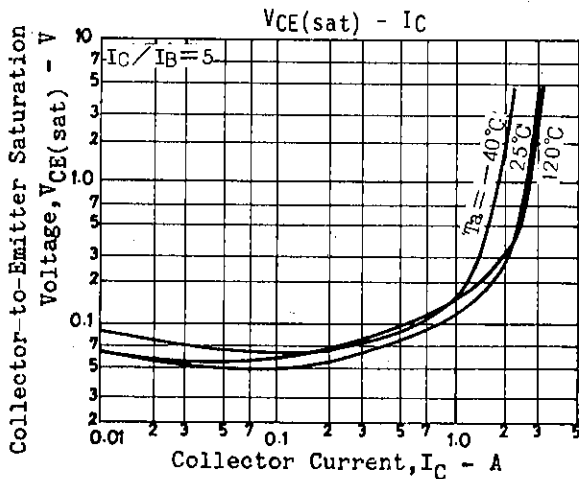
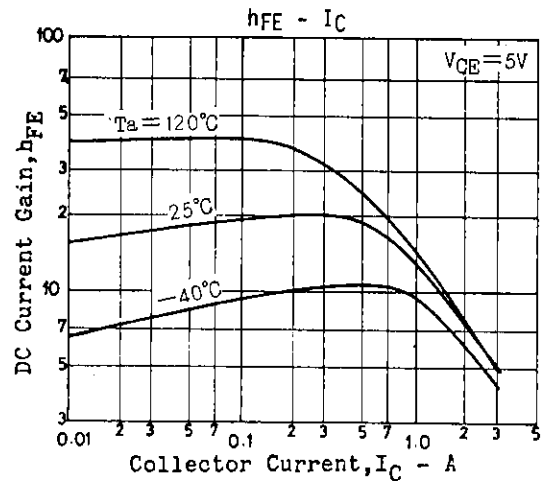
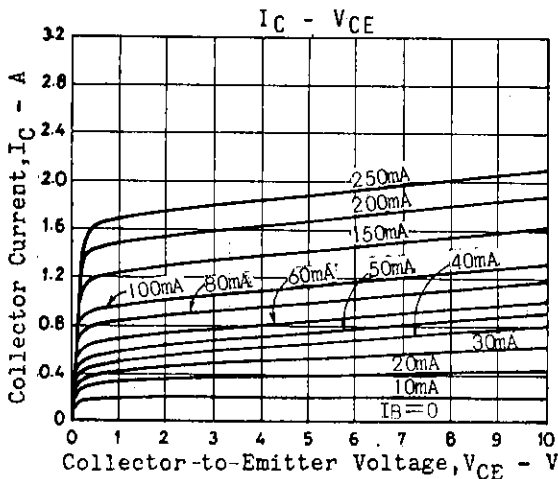
$V_{CC} = 400V$
 $5I_{B1} = -2.5I_{B2} = I_C = 2A$
 $R_L = 200ohms$

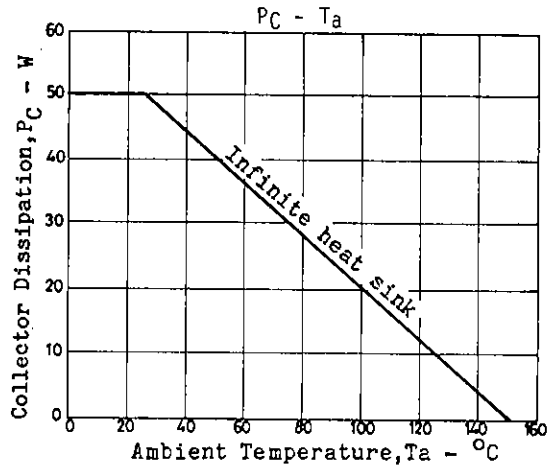
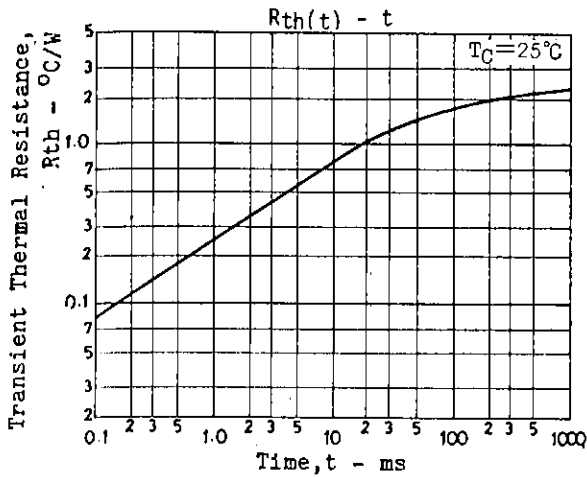
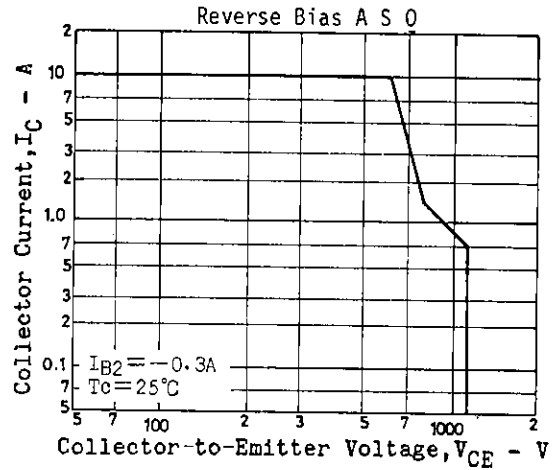
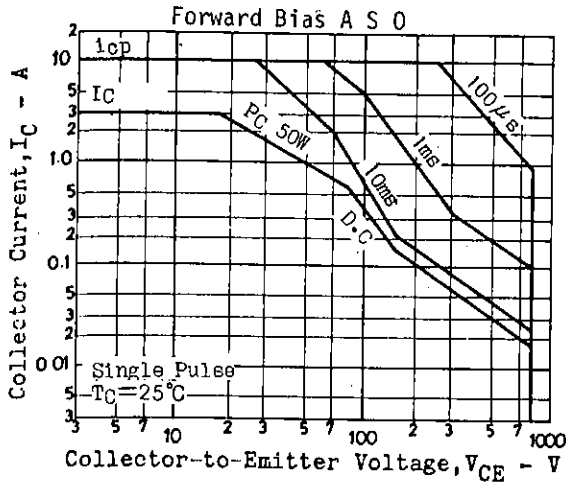
0.5 μs
 3.0 μs
 0.3 μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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