

<b>SANYO</b>	No. 1594B	<b>2SC3460</b>
NPN Triple Diffused Planar Silicon Transistor		
FOR SWITCHING REGULATORS		

**Features**

- . High breakdown voltage and high reliability.
- . Fast switching speed ( $t_f$ : 0.1 $\mu$ s typ.)
- . Wide ASO.
- . Adoption of MBIT process.

**Absolute Maximum Ratings at Ta=25°C**

				unit
Collector-to-Base Voltage	V <sub>CB0</sub>	1100	V	
Collector-to-Emitter Voltage	V <sub>CE0</sub>	800	V	
Emitter-to-Base Voltage	V <sub>EBO</sub>	7	V	
Collector Current	I <sub>C</sub>	6	A	
Peak Collector Current	i <sub>cp</sub>	PW $\leq$ 300 $\mu$ s, Duty Cycle $\leq$ 10%		20 A
Base Current	I <sub>B</sub>	3	A	
Collector Dissipation	P <sub>C</sub>	100	W	T <sub>C</sub> =25°C
Junction Temperature	T <sub>J</sub>	150	°C	
Storage Temperature	T <sub>stg</sub>	-55 to +150		°C

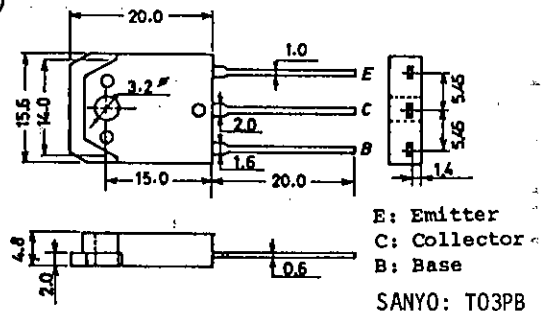
**Electrical Characteristics at Ta=25°C**

		min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub> V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	$\mu$ A
Emitter Cutoff Current	I <sub>EBO</sub> V <sub>EB</sub> =5V, I <sub>C</sub> =0			10	$\mu$ A
DC Current Gain	h <sub>FE</sub> (1) V <sub>CE</sub> =5V, I <sub>C</sub> =0.4A	10*		40*	
	h <sub>FE</sub> (2) V <sub>CE</sub> =5V, I <sub>C</sub> =2A	8			
Gain-Bandwidth Product	f <sub>T</sub> V <sub>CE</sub> =10V, I <sub>C</sub> =0.4A		15		MHz
Output Capacitance	c <sub>ob</sub> V <sub>CB</sub> =10V, f=1MHz		120		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub> I <sub>C</sub> =3A, I <sub>B</sub> =0.6A			2.0	V
B-E Saturation Voltage	V <sub>BE(sat)</sub> I <sub>C</sub> =3A, I <sub>B</sub> =0.6A			1.5	V
C-B Breakdown Voltage	V(BR)CBO I <sub>C</sub> =1mA, I <sub>E</sub> =0	1100			V
C-E Breakdown Voltage	V(BR)CEO I <sub>C</sub> =5mA, R <sub>BE</sub> = $\infty$	800			V
E-B Breakdown Voltage	V(BR)EBO I <sub>E</sub> =1mA, I <sub>C</sub> =0	7			V
C-E Sustain Voltage	V <sub>CEX(sus)</sub> I <sub>C</sub> =3A	800			V
Turn-On Time	t <sub>on</sub> V <sub>CC</sub> =400V, I <sub>B1</sub> =-I <sub>B2</sub> =0.6A, L=1mH, clamped			0.5	$\mu$ s
Storage Time	t <sub>stg</sub> 5I <sub>B2</sub> =-2.5I <sub>B2</sub> =I <sub>C</sub> =4A, R <sub>L</sub> =100ohms			3.0	$\mu$ s
Fall Time	t <sub>f</sub>			0.3	$\mu$ s

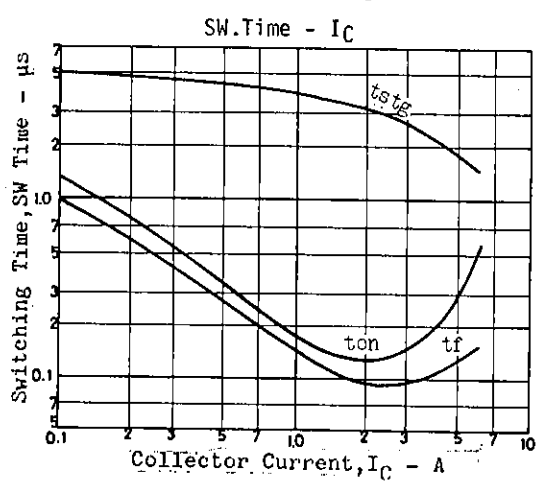
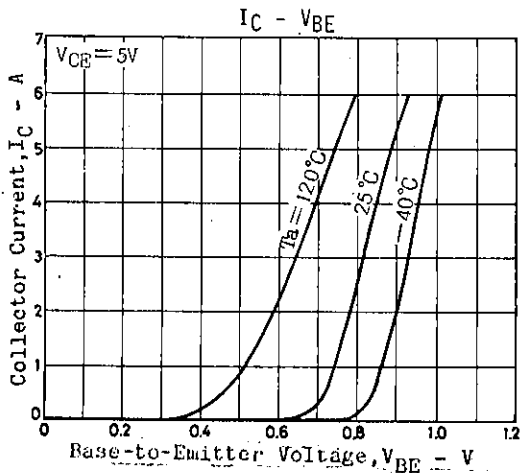
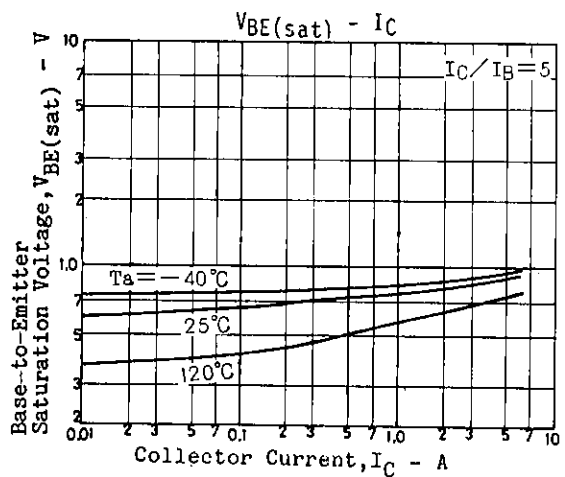
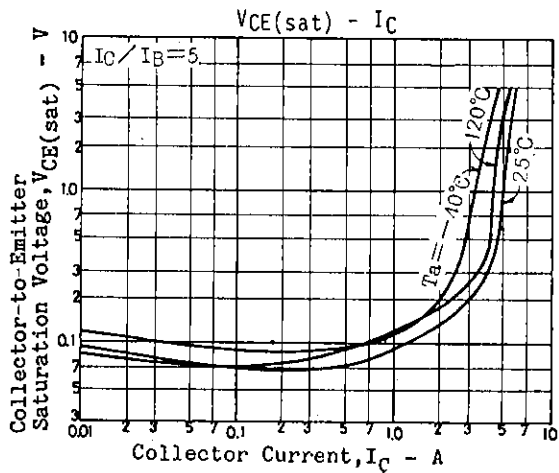
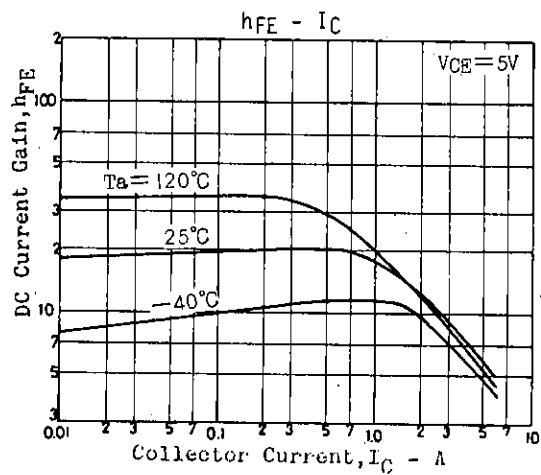
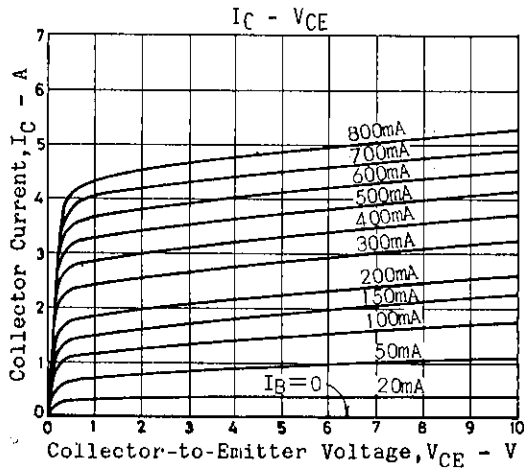
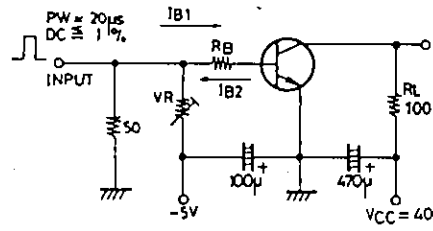
\*: The h<sub>FE</sub>(1) of the 2SC3460 is classified as follows. When specifying the h<sub>FE</sub>(1) rank, specify two ranks or more in principle.

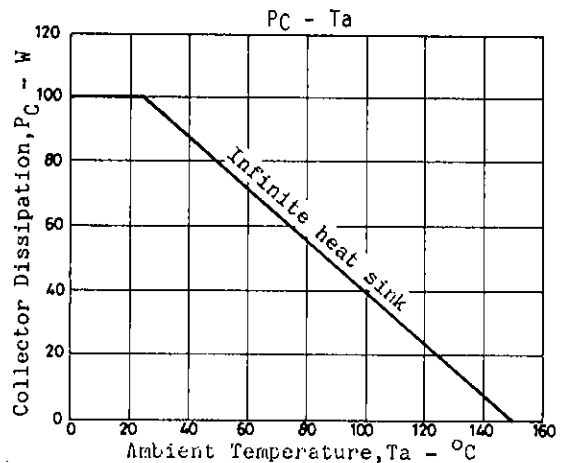
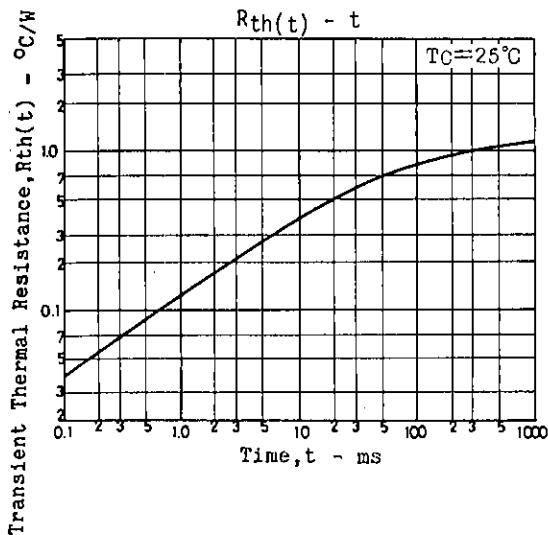
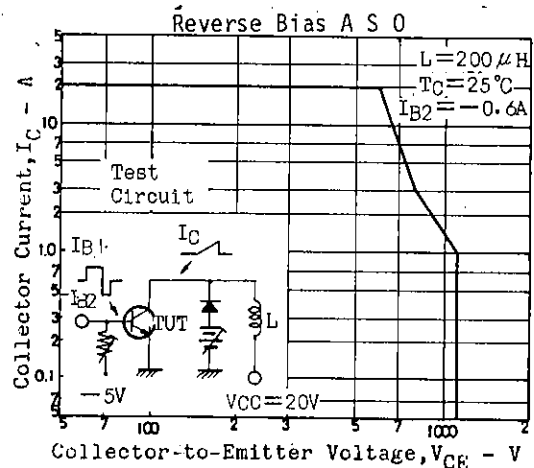
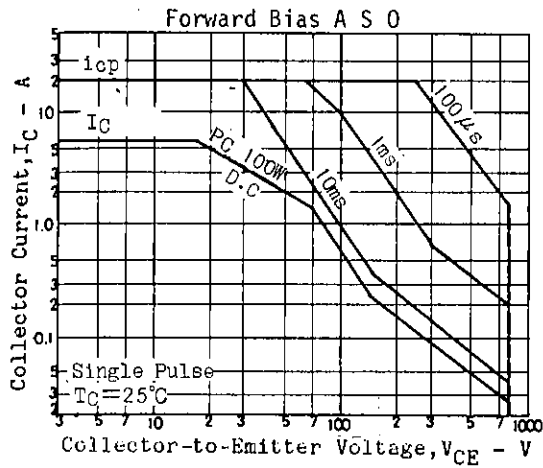
10 K	20	15 L	30	20 M	40
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**Package Dimensions 2022**  
(unit:mm)



Switching Time Test Circuit





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