

<b>SANYO</b>	No.1544B	<b>2SC3446</b> NPN Triple Diffused Planar Silicon Transistor FOR SWITCHING REGULATORS
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**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	VCBO		800 V
Collector-to-Emitter Voltage	VCEO		500 V
Emitter-to-Base Voltage	VEBO		7 V
Collector Current	IC		3 A
Peak Collector Current	icp	PW $\leq$ 300 $\mu$ s, Duty Cycle $\leq$ 10%	6 A
Base Current	IB		1 A
Collector Dissipation	PC	TC=25°C	40 W
Junction Temperature	Tj		150 °C
Storage Temperature	Tstg		-55 to +150 °C

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

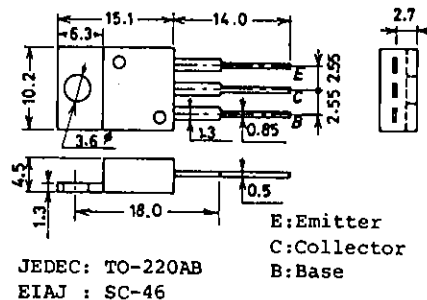
			min	typ	max	unit
Collector Cutoff Current	ICBO	VCB=500V, IE=0			10	$\mu$ A
Emitter Cutoff Current	IEBO	VEB=5V, IC=0			10	$\mu$ A
DC Current Gain	hFE(1)	VCE=5V, IC=0.3A	15*			
	hFE(2)	VCE=5V, IC=1.5A	8			
Gain Bandwidth Product	fT	VCE=10V, IC=0.3A		18		MHz
Output Capacitance	Cob	VCB=10V, f=1MHz		50		pF
C-E Saturation Voltage	VCE(sat)	IC=1.5A, IB=0.3A			1.0	V
B-E Saturation Voltage	VBE(sat)	IC=1.5A, IB=0.3A			1.5	V
C-B Breakdown Voltage	V(BR)CBO	IC=1mA, IE=0	800			V
C-E Breakdown Voltage	V(BR)CEO	IC=5mA, RBE= $\infty$	500			V
E-B Breakdown Voltage	V(BR)EBO	IE=1mA, IC=0	7			V

\*: The hFE(1) of the 2SC3446 is classified as follows. When specifying the hFE(1) rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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**Package Dimensions 2010A**  
(unit:mm)

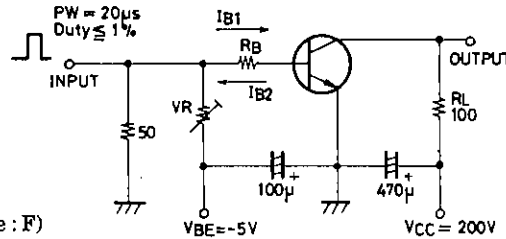


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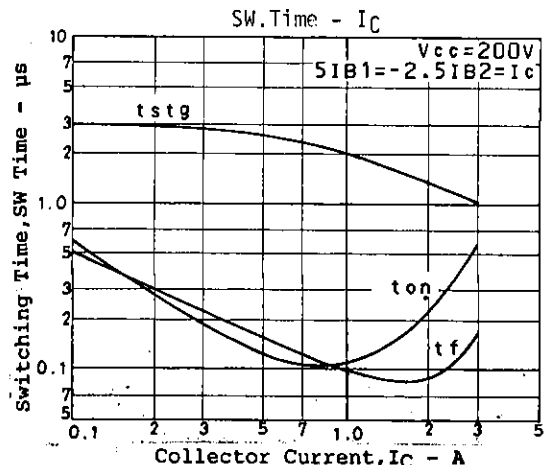
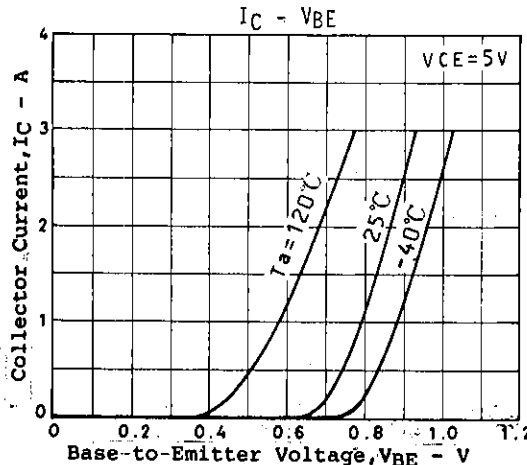
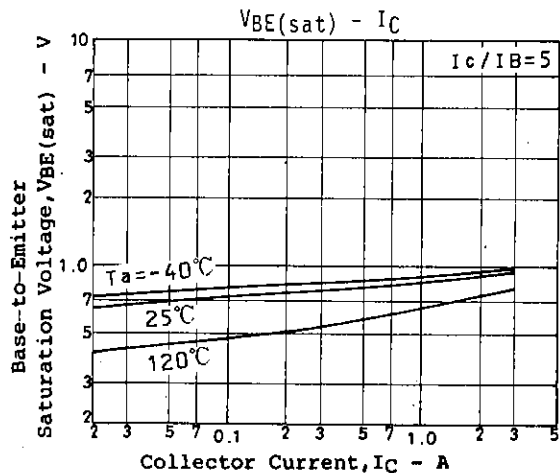
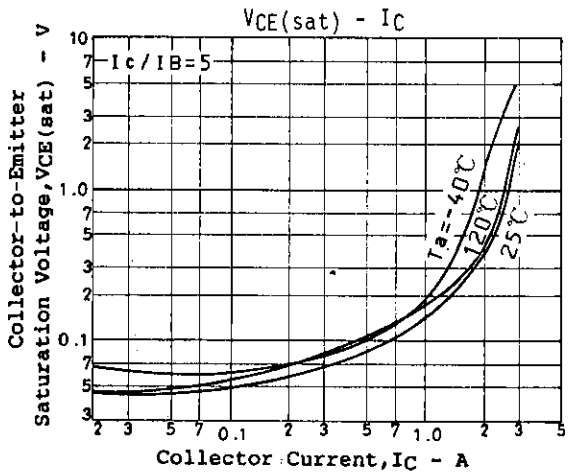
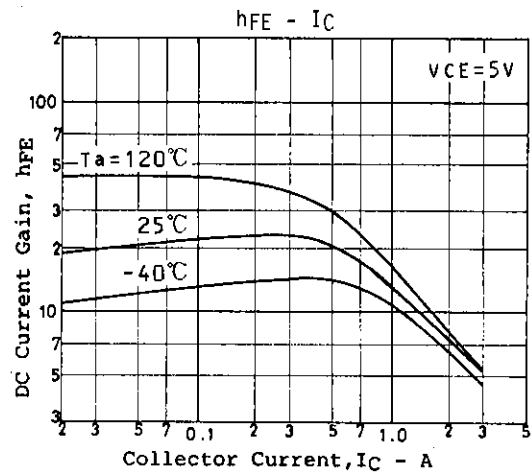
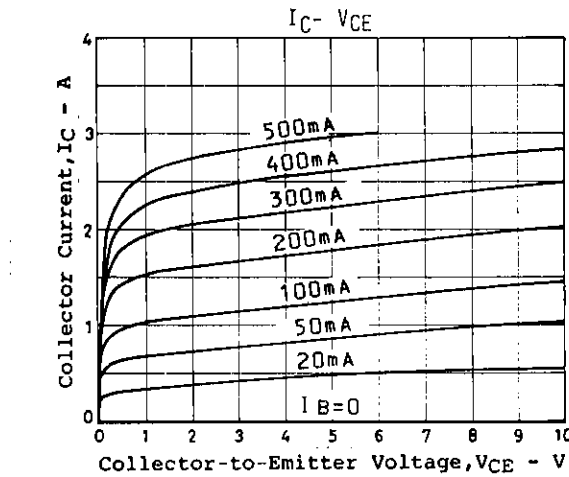
		min	typ	max	unit
C-E Sustain Voltage	$V_{CE(sus)}$ $I_C=1.5A$	500			V
Turn-on Time	$t_{on}$			0.5	$\mu s$
Storage Time	$t_{stg}$			3.0	$\mu s$
Fall Time	$t_f$			0.3	$\mu s$

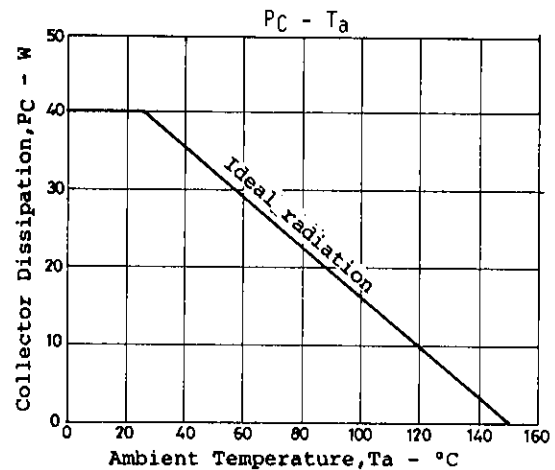
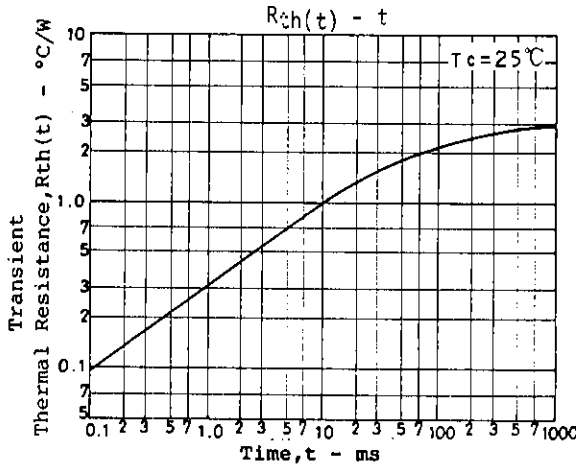
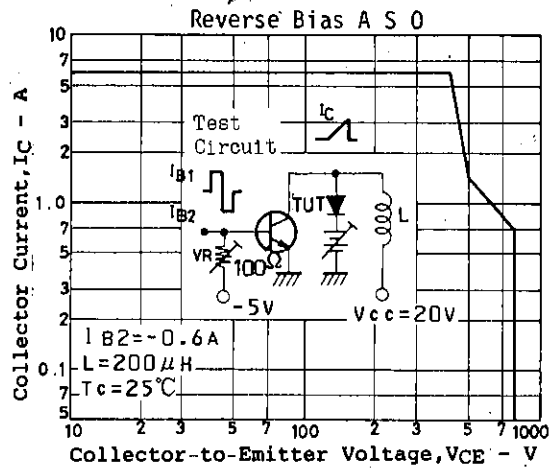
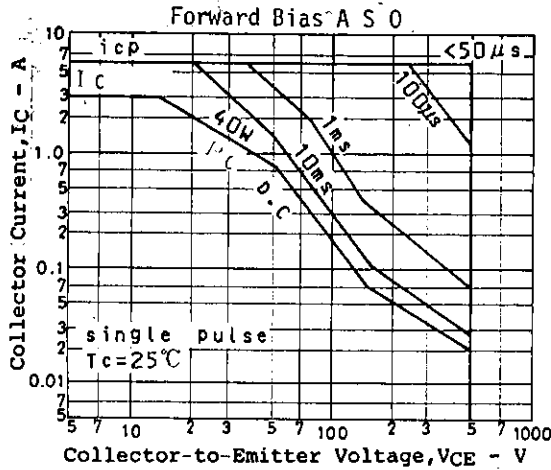
$I_{B1} = -I_{B2} = 0.6A,$   
 $L = 2mH, \text{ clamped}$   
 $V_{CC} = 200V,$   
 $5I_{B1} = -2.5I_{B2} = I_C = 2A,$   
 $R_L = 100\Omega$

Switching Time Test Circuit



Unit (Resistance :  $\Omega$ , Capacitance : F)





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