

SANYO

No.1579D

2SC3456

NPN Triple Diffused Planar Silicon Transistor
FOR SWITCHING REGULATORS

Features

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

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Absolute Maximum Ratings at T _a =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}	PW≤300μs,Duty Cycle≤10%	5	A
Base Current	I _B		0.8	A
Collector Dissipation	P _C	T _c =25°C	40	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

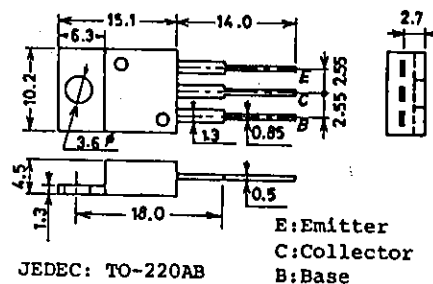
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=800\text{V}, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=0.1\text{A}$	10*		40*	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=0.1\text{A}$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		35		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.75\text{A}, I_B=0.15\text{A}$			2.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.75\text{A}, I_B=0.15\text{A}$			1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	1100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5\text{mA}, R_{BE}=\infty$	800			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	7			V

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*: 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.

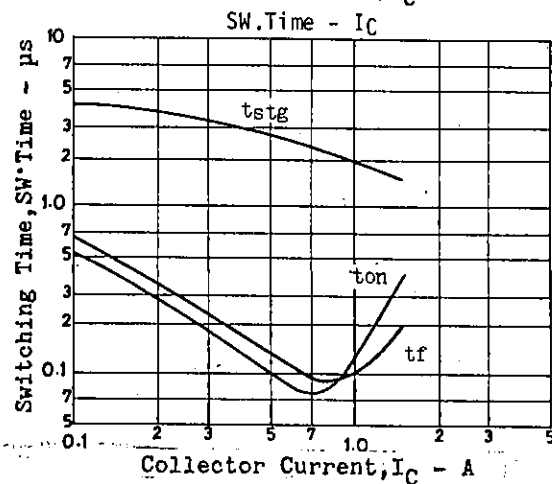
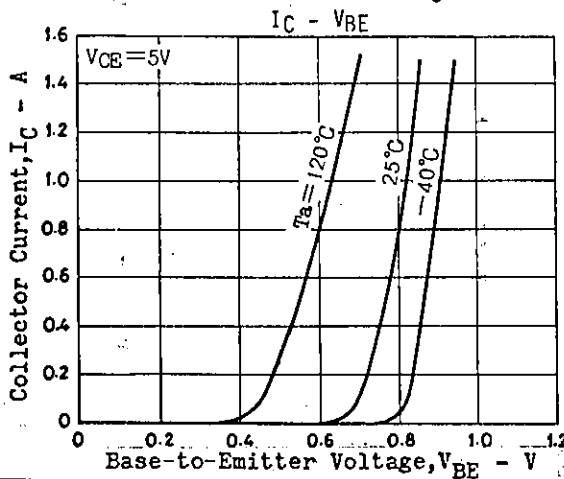
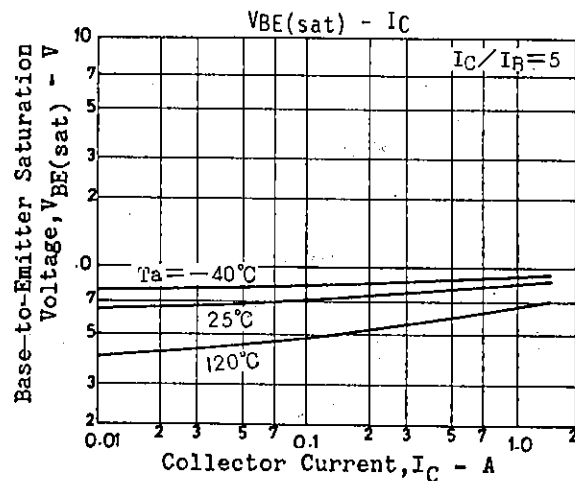
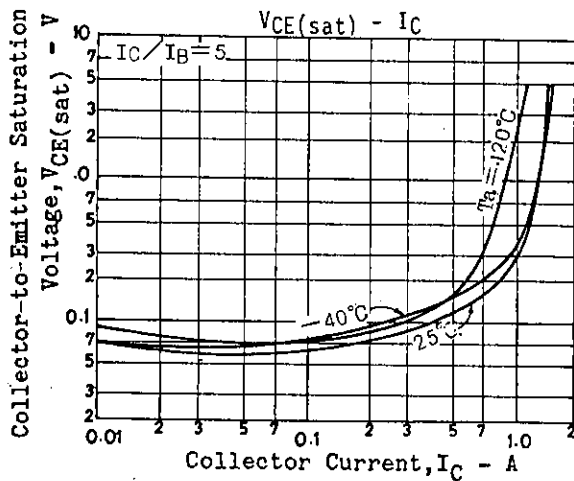
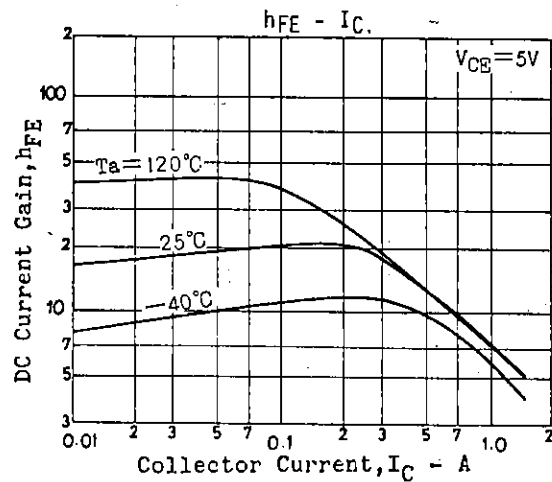
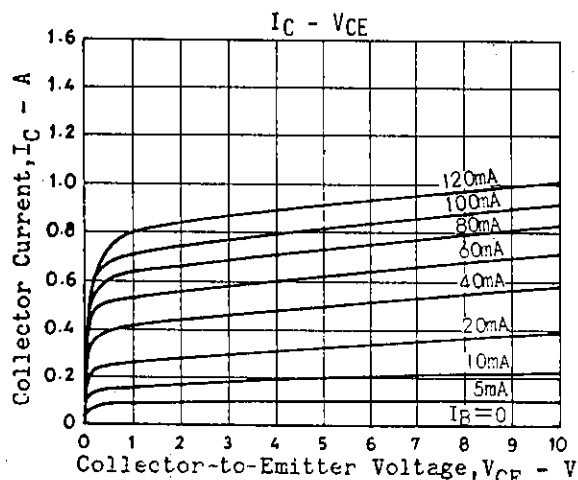
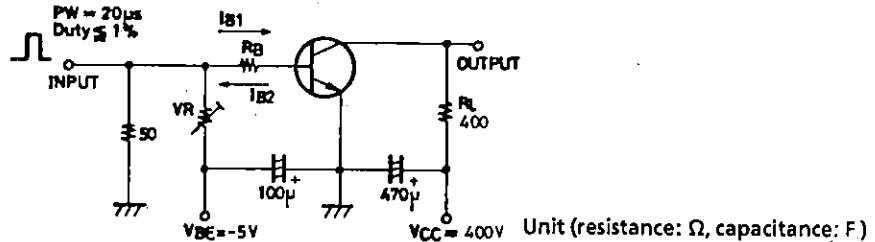
10	K	20	15	L	30	20	M	40
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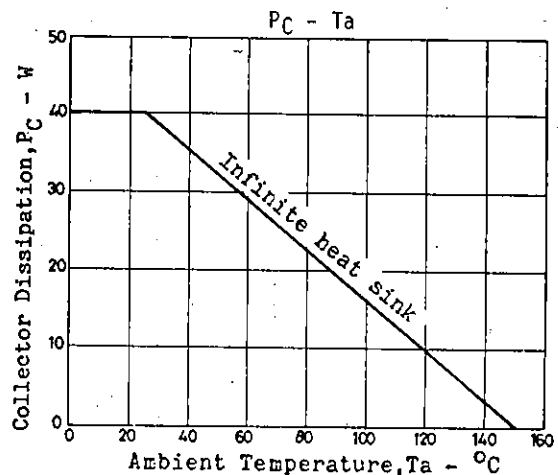
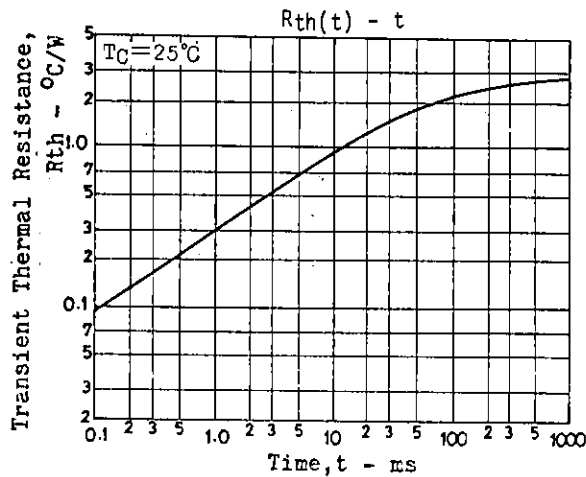
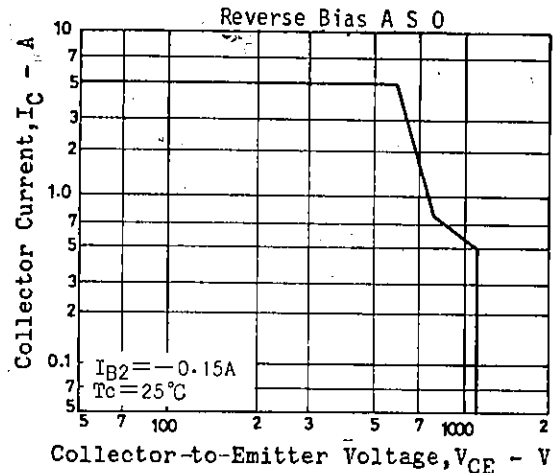
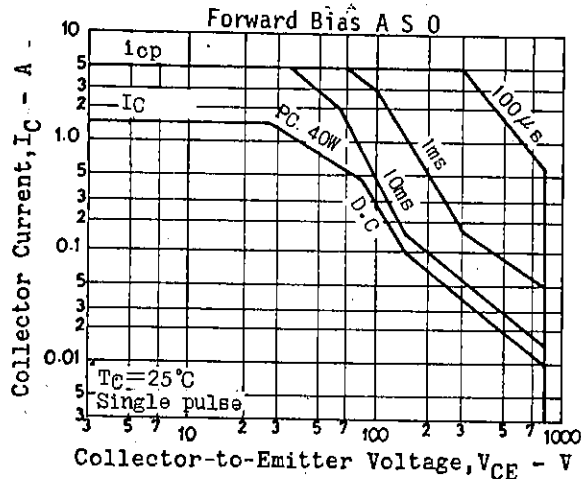
Package Dimensions 2010A (unit:mm)

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Collector-to-Emitter
Sustain Voltage $V_{CE(sus)}$ $I_C = 0.75A$
 $I_{B1} = -I_{B2} = 0.15A$,
 $L = 5mH$, clampedmin typ max unit
800 VTurn-on Time t_{on} Fall Time t_{stg} Storage Time 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





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