

SANYO	No. 1596C	2SC3461
NPN Triple Diffused Planar Type 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 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	8	A
Peak Collector Current	i_{cp}	25	A
Base Current	I_B	4	A
Collector Dissipation	P_C	140	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

$PW \leq 300\mu s, \text{Duty Cycle} \leq 10\%$
 $T_C = 25^\circ C$

Electrical Characteristics at Ta=25°C

		min	typ	max	unit
Collector Cutoff Current	I_{CB0}			10	μA
Emitter Cutoff Current	I_{EBO}			10	μA
DC Current Gain	$h_{FE}(1)$	10*		40*	
	$h_{FE}(2)$	8			
Gain-Bandwidth Product	f_T		15		MHz
Output Capacitance	c_{ob}		155		pF
C-E Saturation Voltage	$V_{CE(sat)}$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	800			V

$V_{CB} = 800V, I_E = 0$
 $V_{EB} = 5V, I_C = 0$
 $V_{CE} = 5V, I_C = 0.6A$
 $V_{CE} = 5V, I_C = 3A$
 $V_{CE} = 10V, I_C = 0.6A$
 $V_{CB} = 10V, f = 1MHz$
 $I_C = 4A, I_B = 0.8A$
 $I_C = 4A, I_B = 0.8A$
 $I_C = 1mA, I_E = 0$
 $I_C = 5mA, R_{BE} = \infty$
 $I_E = 1mA, I_C = 0$
 $I_C = 4A$
 $2I_{B1} = -I_{B2} = 0.8A,$
 $L = 1mH, \text{Clamped}$

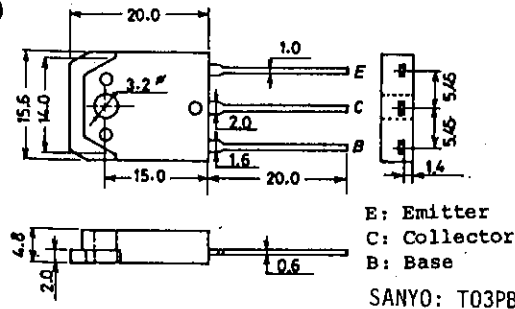
t_{on}	0.5	μs
t_{stg}	3.0	μs
t_f	0.3	μs

$V_{CC} = 400V,$
 $5I_{B2} = -2.5I_{B2} = I_C = 6A,$
 $R_L = 66.7\text{ohms}$

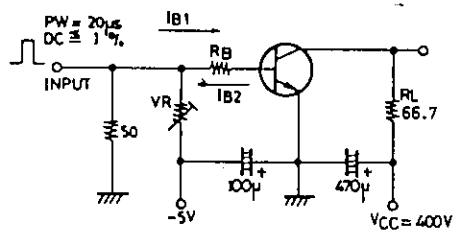
*: The 2SC3461 is classified by 0.6A h_{FE} as follows:

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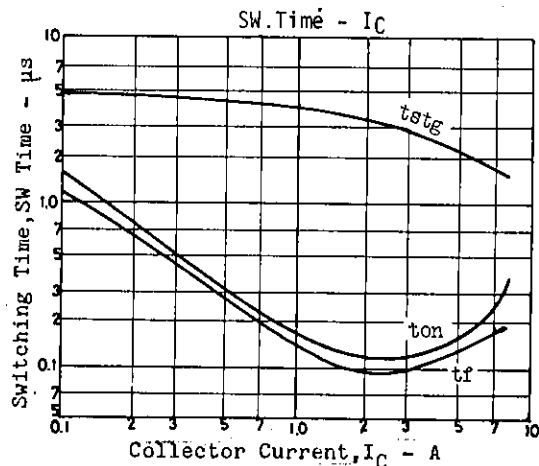
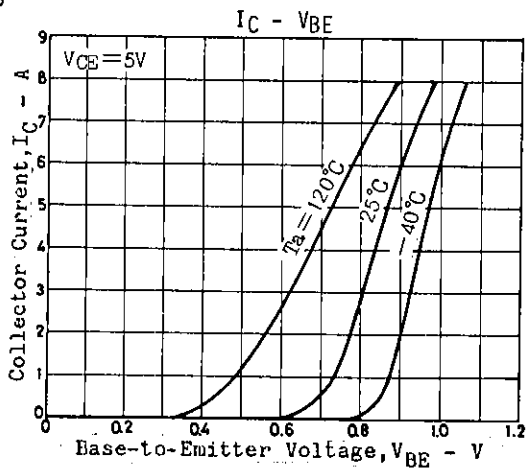
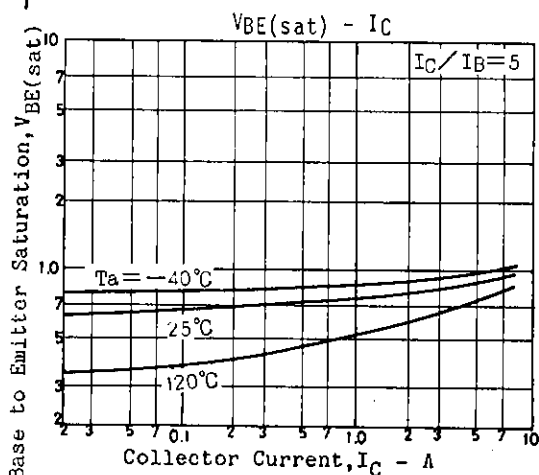
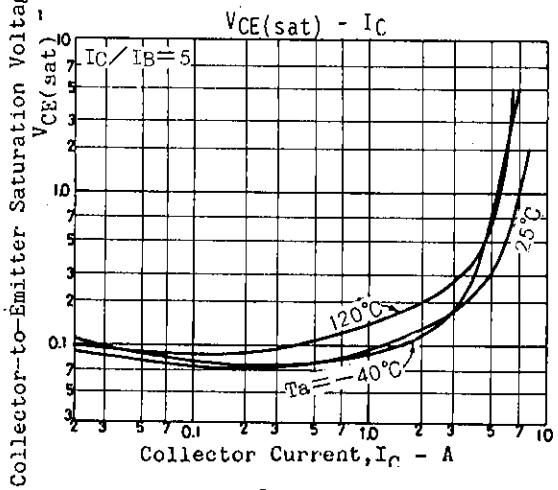
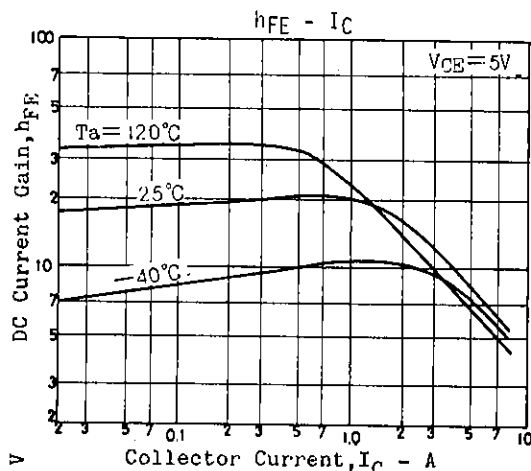
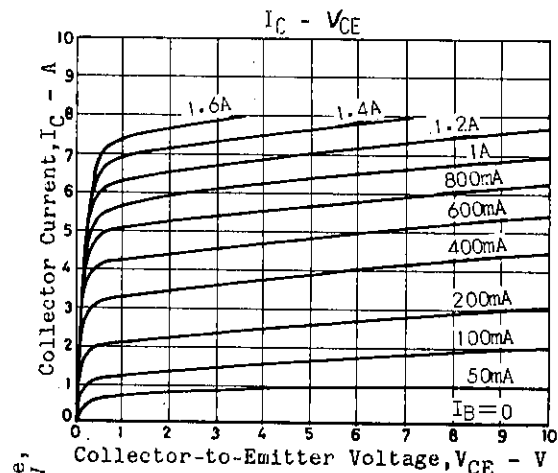
Package Dimensions 2022
(unit: mm)

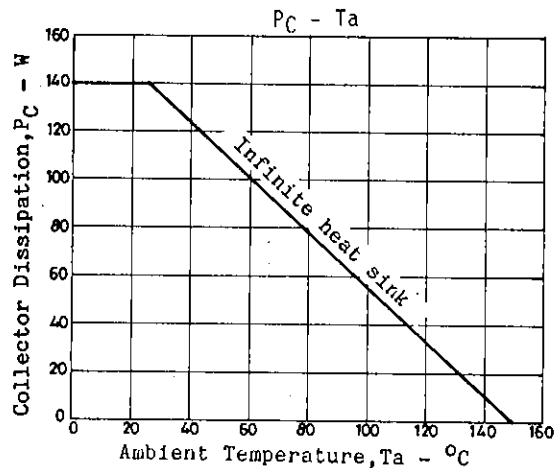
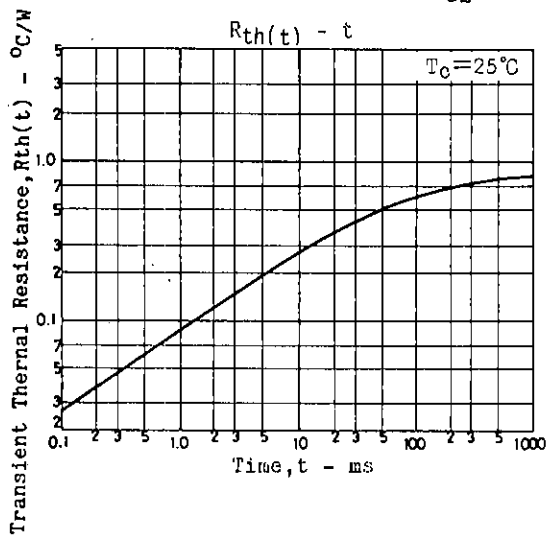
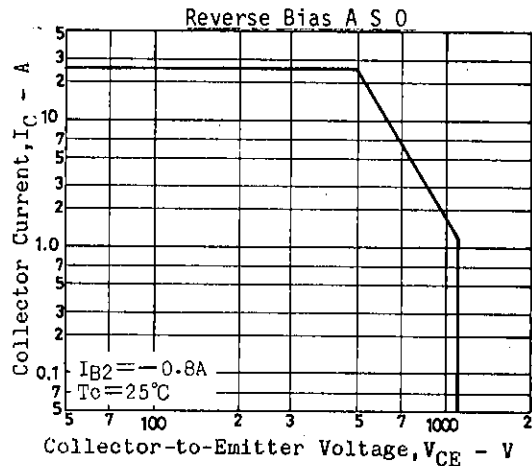
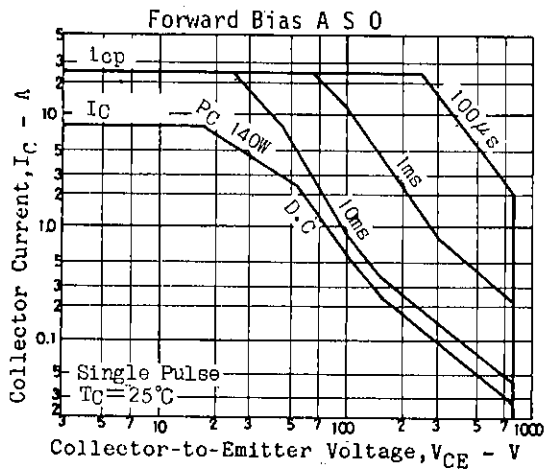


Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)





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