

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

Collector-to-Base Voltage	V_{CB0}	1100	V	unit
Collector-to-Emitter Voltage	V_{CE0}	800	V	
Emitter-to-Base Voltage	V_{EBO}	7	V	
Collector Current	I_C	8	A	
Peak Collector Current	i_{cp}	PW \leq 300 μ s, Duty Cycle \leq 10%		25
Base Current	I_B	4	A	
Collector Dissipation	P_C	$T_C=25^\circ C$		140
Junction Temperature	T_j	150	°C	
Storage Temperature	T_{stg}	-55 to +150		°C

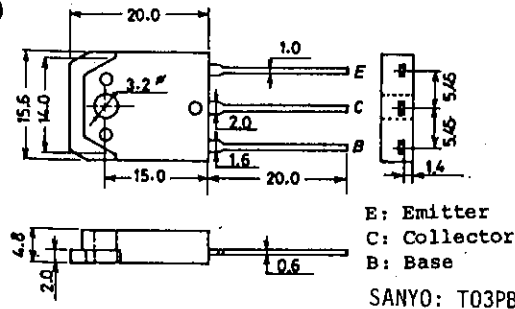
Electrical Characteristics at Ta=25°C

		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	$h_{FE}(1)$	$V_{CE}=5V, I_C=0.6A$		10*	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=3A$		40*	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.6A$		15	MHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1MHz$		155	pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=0.8A$		2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=4A, I_B=0.8A$		1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$		1100	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$		800	V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$		7	V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=4A$		800	V
Turn-On Time	t_{on}	$2I_{B1}=-I_{B2}=0.8A,$ $L=1mH, \text{Clamped}$ $V_{CC}=400V,$ $5I_{B2}=-2.5I_{B2}=I_C=6A,$ $R_L=66.7\text{ohms}$		0.5	μs
Storage Time	t_{stg}			3.0	μs
Fall Time	t_f			0.3	μs

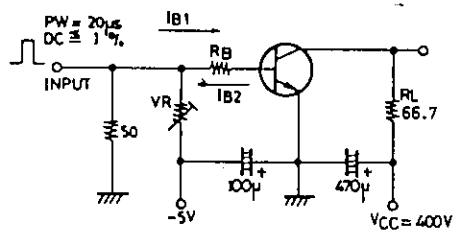
*: The 2SC3461 is classified by 0.6A h_{FE} as follows:

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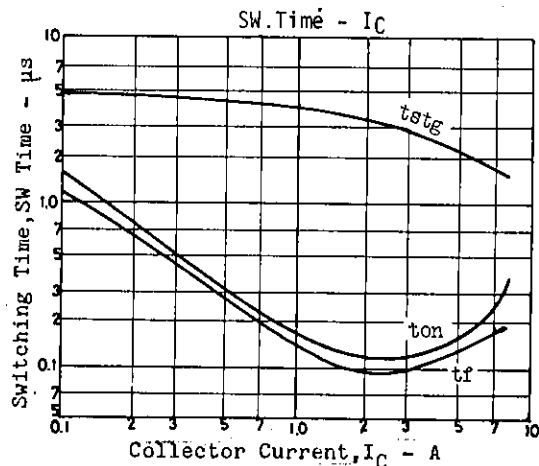
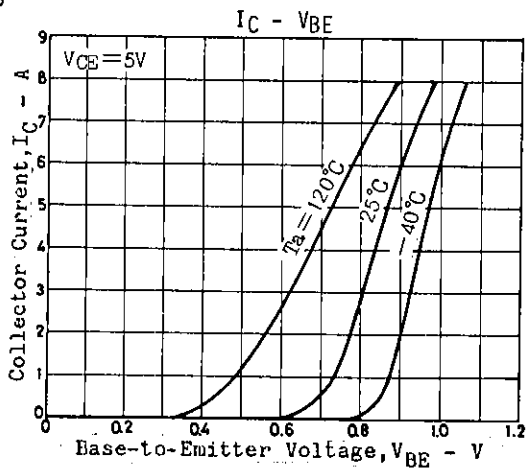
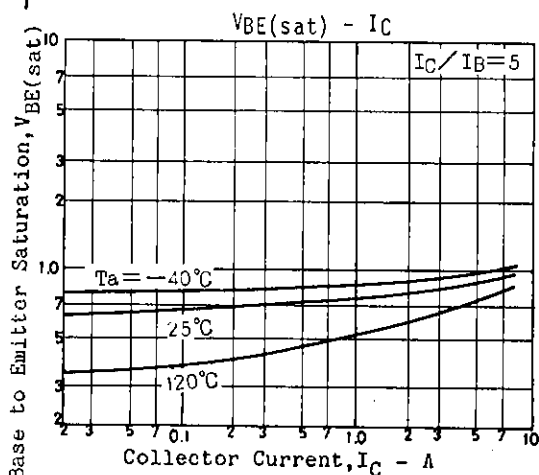
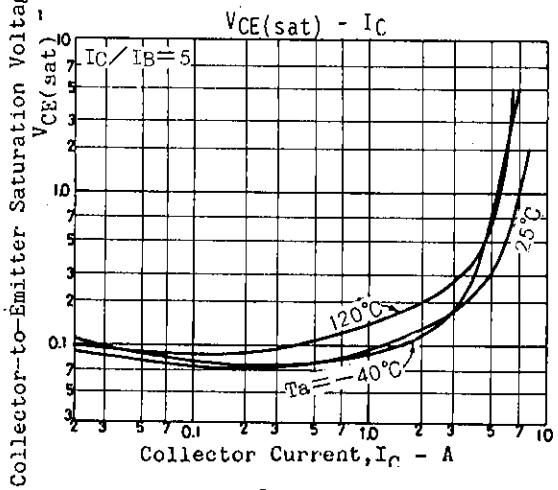
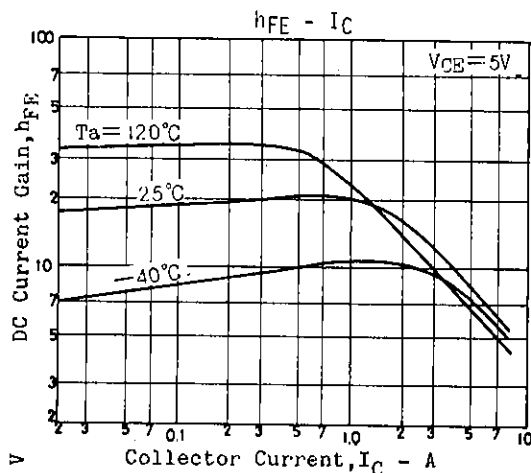
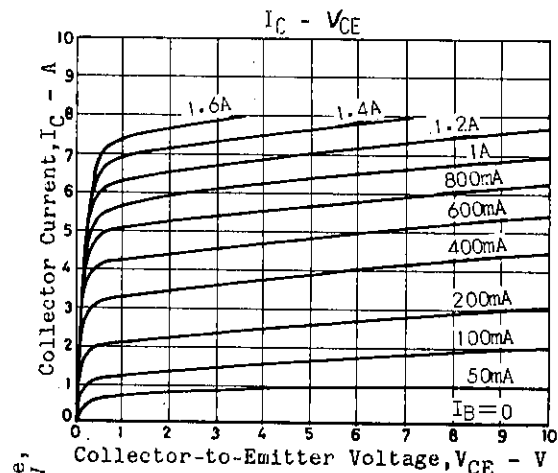
Package Dimensions 2022
(unit:mm)

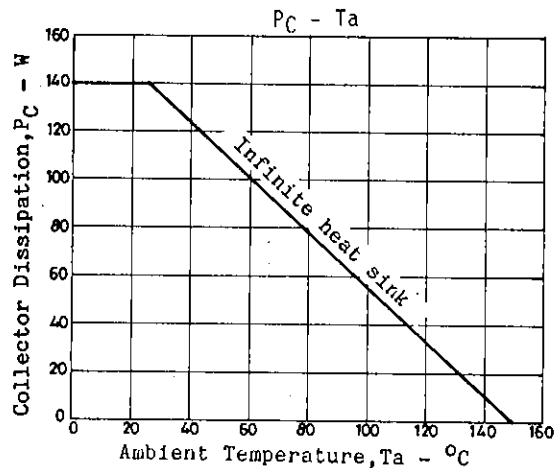
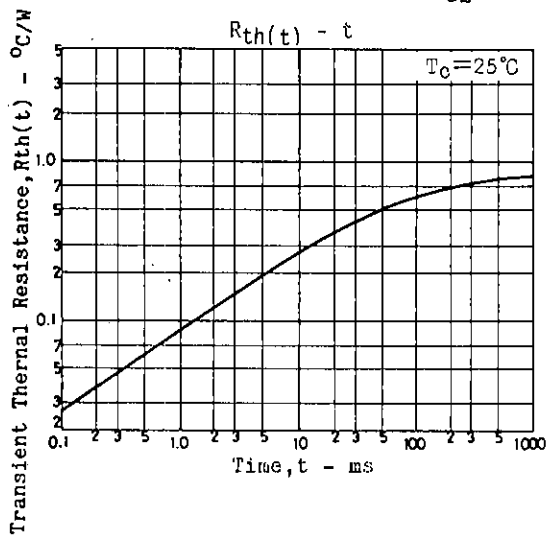
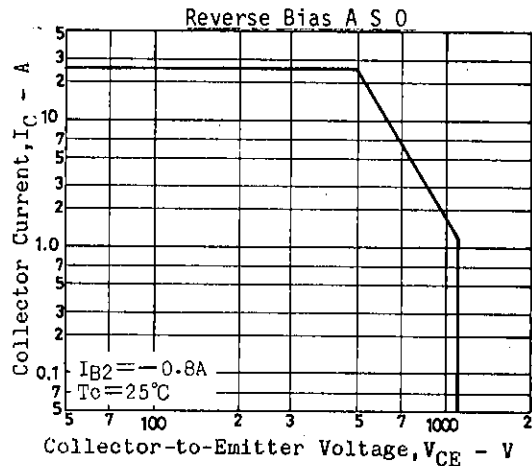
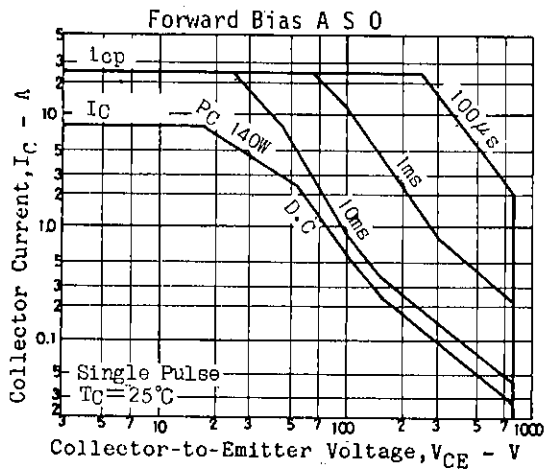


Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)





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