

SANYO

No.1596C

2SC3461

NPN Triple Diffused Planar Silicon Transistor

800V/8A Switching Regulator Applications

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

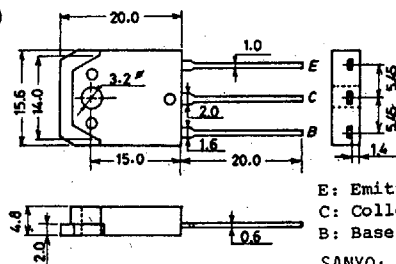
			unit
Collector-to-Base Voltage	V_{CB0}	1100	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	8	A
Collector Current (Pulse)	I_{CP}	25	A
Base Current	I_B	4	A
Collector Dissipation	P_C	140	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-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_{CBO}	$V_{CB}=800V, I_E=0$			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*		40*	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=3A$	8			
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	$V_{CE(sat)}$	$I_C=4A, I_E=0.8A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=4A, I_E=0.8A$			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}	$2I_{B1}=-I_{B2}=0.8A, L=1mH, \text{Clamped}$			0.5	μs
Storage Time	t_{stg}	$V_{CC}=400V, 5I_{B2}=-2.5I_{B2}=I_C=6A,$			3.0	μs
Fall Time	t_f	$R_L=66.7\Omega$			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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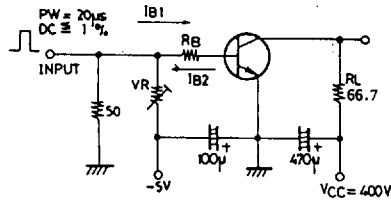
Package Dimensions 2022
(unit:mm)

E: Emitter
C: Collector
B: Base

SANYO: T03PB

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Switching Time Test Circuit

Unit (Resistance : Ω , Capacitance : F)