

SANYO

No.1591C

2SC3459

NPN Triple Diffused Planar Silicon Transistor

800V/4.5A 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 $T_a=25^\circ\text{C}$

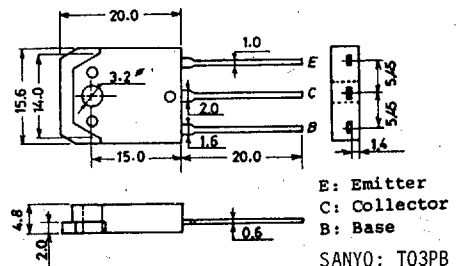
Absolute Maximum Ratings at Ta=25°C			unit	
Collector-to-Base Voltage	V _{CBO}	1100	V	
Collector-to-Emitter Voltage	V _{CEO}	800	V	
Emitter-to-Base Voltage	V _{EBO}	7	V	
Collector Current	I _C	4.5	A	
Collector Current (Pulse)	I _{CP}	PW≤300μs, Duty Cycle≤10%	15	A
Base Current	I _B		2	A
Collector Dissipation	P _C	T _C =25°C	90	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	$h_{FE}(1)$	$V_{CE}=5\text{V}, I_C=0.3\text{A}$	10*		40*	
	$h_{FE}(2)$	$V_{CE}=5\text{V}, I_C=1.5\text{A}$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=0.3\text{A}$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		90		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=0.4\text{A}$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=0.4\text{A}$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5\text{mA}, R_{BE}=\infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=2\text{A}$	800			V
Turn-ON Time	t_{on}	$V_{CC}=400\text{V},$ $5I_{B2}=-2.5I_{B2}=I_C=3\text{A},$ $R_L=133\Omega$			0.5	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				0.3	μs

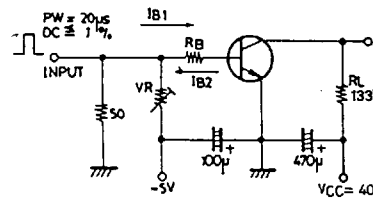
*: The $h_{FE}(1)$ of the 2SC3459 is classified as follows. When specifying the $h_{FE}(1)$ rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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Package Dimensions 2022
(unit:mm)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

Switching Time Test Circuit

Unit (Resistance : Ω , Capacitance : F)