

SANYO

No.1589C

2SC3458

NPN Triple Diffused Planar Silicon Transistor

800V/3A 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

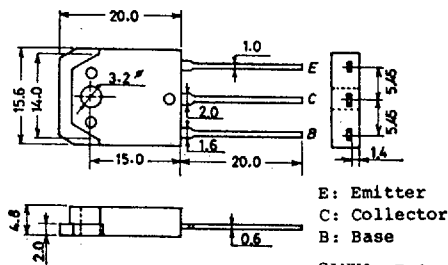
			unit
Collector-to-Base Voltage	V_{CB0}	1100	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	3	A
Collector Current (Pulse)	I_{CP}	$PW \leq 300\mu s, \text{Duty Cycle} \leq 10\%$	
Base Current	I_B	1.5	A
Collector Dissipation	P_C	80	W
Junction Temperature	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_{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	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.2A$	10*		40*	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=1A$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.2A$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5A, I_B=0.3A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5A, I_B=0.3A$			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	$V_{CEX(sus)}$	$I_C=1.5A$	800			V
Turn-On Time	t_{on}	$I_{B1}=-I_{B2}=0.3A,$ $L=2mH, \text{clamped}$			0.5	μs
Storage Time	t_{stg}	$V_{CC}=400V,$ $5I_{B1}=-2.5I_{B2}=I_C=2A,$ $R_L=200\Omega$			3.0	μs
Fall Time	t_f				0.3	μs

*: The $h_{FE(1)}$ of the 2SC3458 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)

E: Emitter
C: Collector
B: Base

SANYO: TO3PB

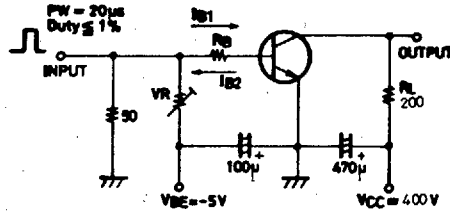
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4237AT/N295MW/3085KI/D054KI, TS No. 1589-1/3

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Switching Time Test Circuit

Unit (Resistance : Ω , Capacitance : F)