Ordering number: EN 1589C

SANYO No.1589C

2SC3458

NPN Triple Diffused Planar Type Silicon Transistor

FOR SWITCHING REGULATORS

Features

- High breakdown voltage and high reliability.
- Fast switching speed (t_f: 0.1μs typ.)
- Wide ASO.
- Adoption of MBIT process.

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		3	A
Peak Collector Current	i_{cp}	PW≦300μs, Duty Cycle≦10%	10	A
Base Current	I_B		1.5	A
Collector Dissipation	P_C	T_C=25°C	80	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

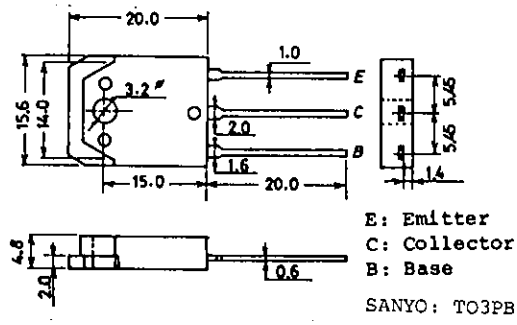
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=800V, I_E=0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.2A	10*		40*	
	$h_{FE(2)}$	V_{CE}=5V, I_C=1A	8			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=0.2A		15		MHz
Output Capacitance	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}=∞	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, I_{B1}=-I_{B2}=0.3A, L=2mH, clamped	800			V
Turn-On Time	t_{on}	V_{CC}=400V, $5I_{B1}$=-2.5I_{B2}=I_C=2A, R_L=200ohms			0.5	μs
Storage Time	t_{stg}				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

Package Dimensions 2022

(unit:mm)



E: Emitter
C: Collector
B: Base

SANYO: TO3PB

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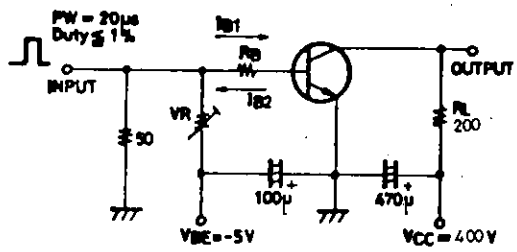
Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)