



No.1252C

2SC3184

NPN Triple Diffused Planar Silicon Transistor

800V/0.5A Switching Regulator Applications

Features

- High breakdown voltage ($V_{CBO} \geq 900V$).
- Fast switching speed.
- Wide ASO.

Absolute Maximum Ratings at $T_a = 25^\circ C$

			unit
Collector-to-Base Voltage	V_{CBO}	900	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	0.5	A
Collector Current (Pulse)	I_{CP}	$PW \leq 300\mu s, \text{duty cycle} \leq 10\%$	2 A
Collector Dissipation	P_C	$T_c = 25^\circ C$	30 W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

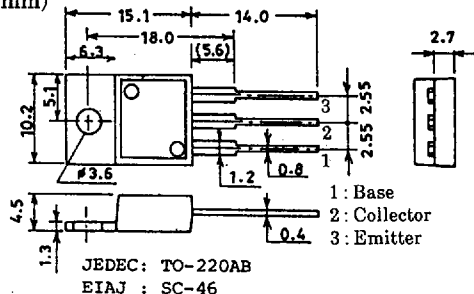
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 800V, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5V, I_C = 60mA$	10*		40*	
		$V_{CE} = 5V, I_C = 300mA$	8			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 300mA, I_B = 60mA$			2	V
Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 60mA$		15		MHz
Output Capacitance	Cob	$V_{CB} = 10V, f = 1MHz$		20		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	900			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	800			V
C-E Sustain Time	$V_{CEO(sus)}$	$I_C = 0.5A, I_B = 0.1A, L = 5mH$	800			V
		$I_C = 0.5A, I_{B1} = 0.1A, I_{B2} = -0.1A$ $L = 5mH, \text{clamped}$	900			V
Turn-ON Time	t_{on}	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			1.0	μs
Storage Time	t_{stg}	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			3.0	μs
Fall Time	t_f	$I_C = 400mA, I_{B1} = 80mA,$ $I_{B2} = -160mA$			1.0	μs

* : For the $h_{FE}(1)$ of the 2SC3184, specify two ranks or more in principle.

10	K	20	15	L	30
20	M	40			

Package Dimensions 2010C

(unit : mm)



Switching Time Test Circuit

