

2SC3457

NPN Triple Diffused Planar Silicon Transistor

800V/3A Switching Regulator Applications

Features

- . High breakdown voltage and high reliability.
- . Fast switching speed (tf: 0.1μs 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 _{CE0}	800	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	3	A
Collector Current (Pulse)	I _{CP}	PW≤300μs, Duty Cycle≤10%	10
Base Current	I _B	1.5	A
Collector Dissipation	P _C	Tc=25°C	50
Junction Temperature	T _J		150
Storage Temperature	T _{stg}		-55 to +150

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	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*	
		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
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =1.5A, I _B =0.3A			2.0	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =1.5A, I _B =0.3A			1.5	V
Collector-to-Base Breakdown Voltage	V _{(BR)CB0}	I _C =1mA, I _E =0	1100			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CE0}	I _C =5mA, R _{BE} =∞	800			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	7			V

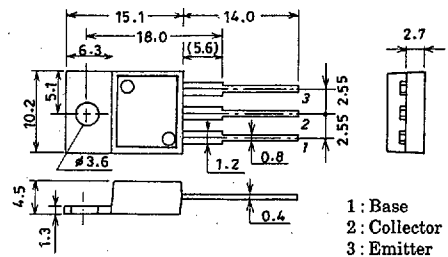
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*: The h_{FE}(1) of the 2SC3457 is classified as follows. When specifying the h_{FE}(1) rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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Package Dimensions 2010C

(unit:mm)



JEDEC: TO220AB
EIAJ : SC46

SANYO Electric Co., Ltd. Semiconductor Business Headquarters

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

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Collector-to-Emitter Sustain Voltage $V_{CEX(sus)}$

$I_C = 1.5A$
 $I_{B1} = -I_{B2} = 0.3A$
 $L = 2mH$, Clamped

min typ max unit
 800 V

Turn-on Time t_{on}

t_{on}

$V_{CC} = 400V$,
 $5I_{B1} = -2.5I_{B2} = I_C = 2A$
 $R_L = 200\Omega$

0.5 μs

Fall Time t_{stg}

t_{stg}

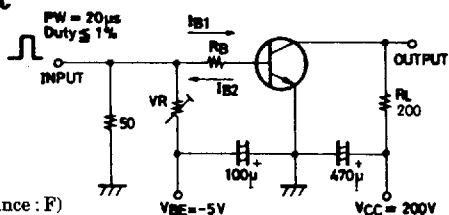
3.0 μs

Storage Time t_f

t_f

0.3 μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)

