Ordering number: EN 1580C

SANYO

No.1580C

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_{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
Collector Current (Pulse)	I_{CP}	PW≦300μs, Duty Cycle≦10%	10	A
Base Current	I_B		1.5	A
Collector Dissipation	P_C	Tc=25°C	50	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

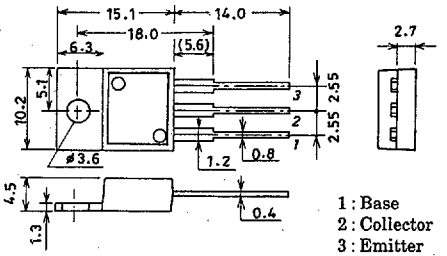
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=800V, I_E=0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.2A	10*		40*	
	$h_{FE(2)}$	V_{CE}=5V, I_C=1A	8			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=0.2A		15		MHz
Output Capacitance	Cob	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	$V_{(BR)CBO}$	I_C=1mA, I_E=0	1100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=5mA, R_{BE}=∞	800			V
Emitter-to-Base Breakdown Volage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	7			V

Continued on next page.

*: 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

Package Dimensions 2010C
(unit: mm)



1: Base
2: Collector
3: Emitter

JEDEC: TO220AB
EIAJ : SC46

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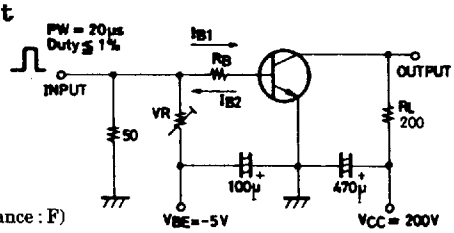
			min	typ	max	unit
Collector-to-Emitter Sustain Voltage	$V_{CEX(sus)}$	I_C=1.5A, I_{B1}=-I_{B2}=0.3A, L=2mH, clamped	800			V
Turn-on Time	ton	V_{CC}=400V, $5I_{B1}$=-2.5I_{B2}=I_C=2A, R_L=200Ω			0.5	μs
Fall Time	tstg				3.0	μs
Storage Time	tf				0.3	μs

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)