

SANYO

No.1576C

2SC3450

NPN Triple Diffused Planar Silicon Transistor

500V/10A 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	VCBO	800	V
Collector-to-Emitter Voltage	VCEO	500	V
Emitter-to-Base Voltage	VEBO	7	V
Collector Current	IC	10	A
Collector Current (Pulse)	ICP	PW \leq 300 μ s, Duty cycle \leq 10%	20
Base Current	IB	3	A
Collector Dissipation	PC	Tc=25°C	90
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Electrical Characteristics at Ta=25°C

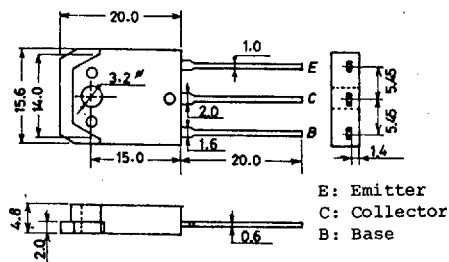
			min	typ	max	unit
Collector Cutoff Current	ICBO	VCB=500V, IE=0			10	μ A
Emitter Cutoff Current	IEBO	VEB=5V, IC=0			10	μ A
DC Current Gain	hFE(1)	VCE=5V, IC=0.8A	15*		50*	
	hFE(2)	VCE=5V, IC=4A	8			
Gain-Bandwidth Product	fT	VCE=10V, IC=0.8A		18		MHz
Output Capacitance	Cob	VCB=10V, f=1MHz		120		pF
C-E Saturation Voltage	VCE(sat)	IC=4A, IB=0.8A			1.0	V
B-E Saturation Voltage	VBE(sat)	IC=4A, IB=0.8A			1.5	V
C-B Breakdown Voltage	V(BR)CBO	IC=1mA, IE=0	800			V
C-E Breakdown Voltage	V(BR)CEO	IC=5mA, RBE= ∞	500			V
E-B Breakdown Voltage	V(BR)EBO	IE=1mA, IC=0	7			V

*: The hFE(1) of the 2SC3450 is classified as follows. When specifying the hFE(1) rank, specify two ranks or more in principle

15	L	30	20	M	40	30	N	50
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Package Dimensions 2022
(unit:mm)

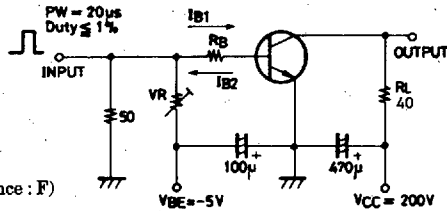


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			min	typ	max	unit
C-E Sustain Voltage	$V_{CE}(sus)$	$I_C=3.5A$ $I_{B1}=-I_{B2}=1.4A$ $L=500\mu H, clamped$	500			V
Turn-on Time	t_{on}	$V_{CC}=200V,$ $5I_{B1}=-2.5I_{B2}=I_C=5A,$ $R_L=40\Omega$			0.5	μs
Storage Time	t_{stg}		3.0	μs		
Fall Time	t_f		0.3	μs		

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)

