

SANYO

No.1576C

2SC3450

NPN Triple Diffused Planar Silicon Transistor

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 $T_a=25^\circ\text{C}$

				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
Peak Collector Current	icp	PW $\leq$ 300 μ s, Duty cycle $\leq$ 10%		20 A
Base Current	IB	3		A
Collector Dissipation	PC	Tc=25 $^\circ\text{C}$		90 W
Junction Temperature	Tj	150		$^\circ\text{C}$
Storage Temperature	Tstg	-55 to +150		$^\circ\text{C}$

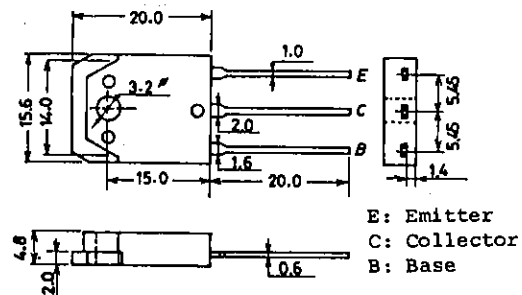
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	ICBO	VCB=500V, IE=0			10	μA
Emitter Cutoff Current	IEBO	VEB=5V, IC=0			10	μA
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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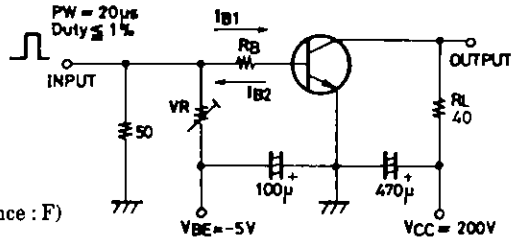
Package Dimensions 2022
(unit:mm)

2SC3450

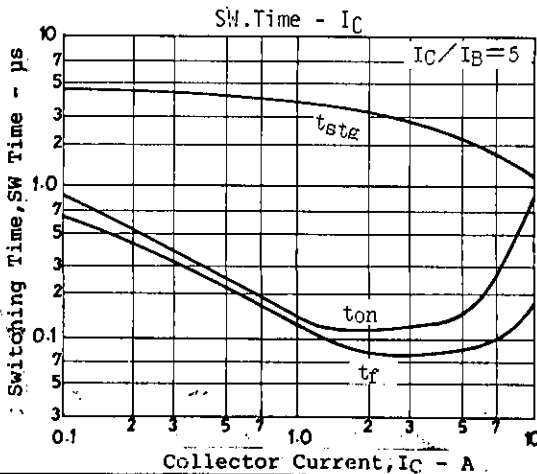
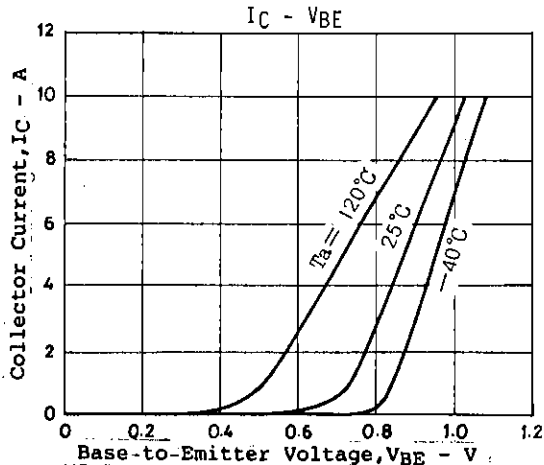
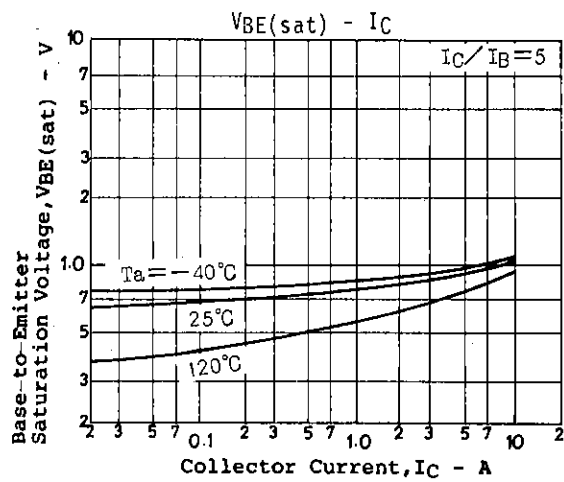
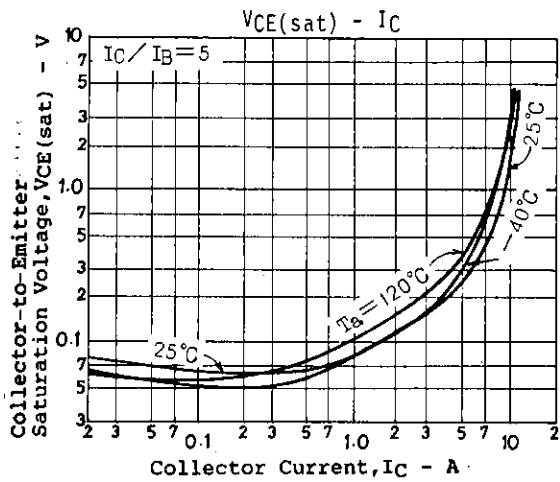
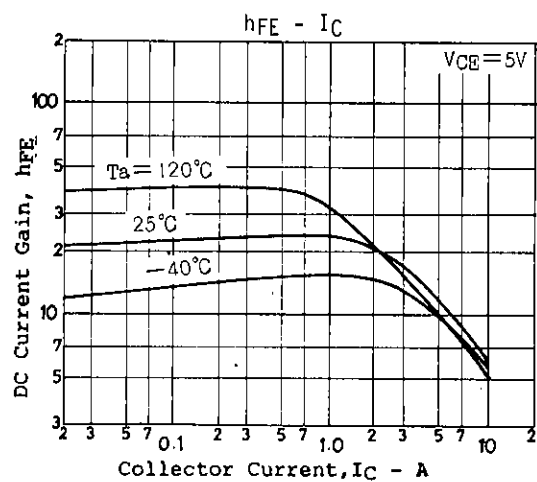
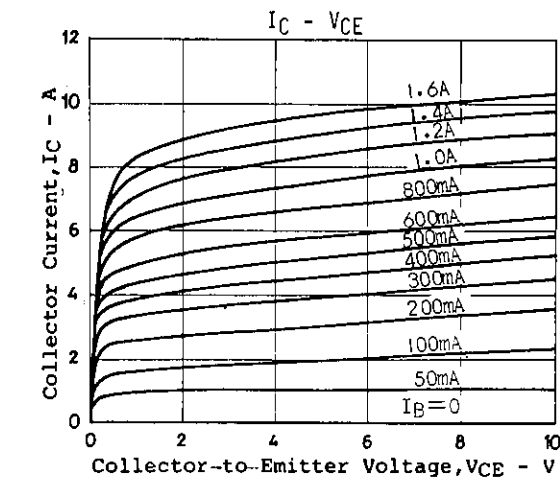
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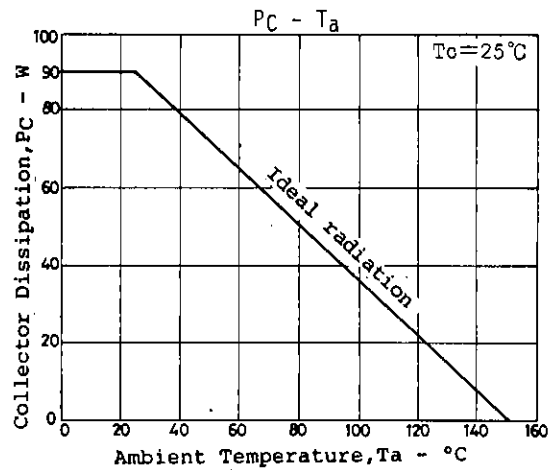
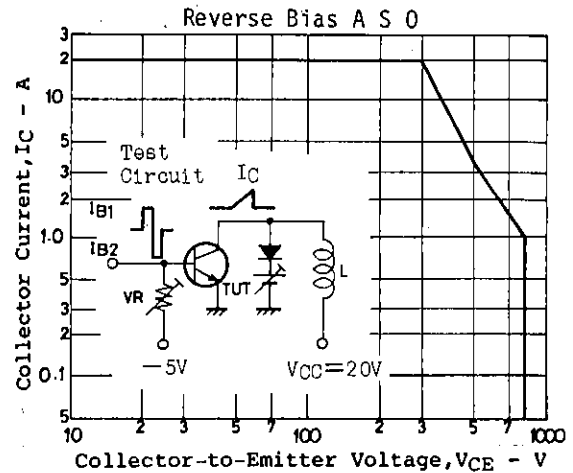
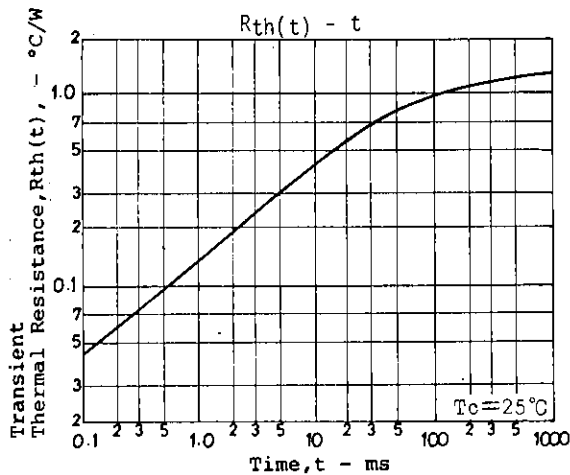
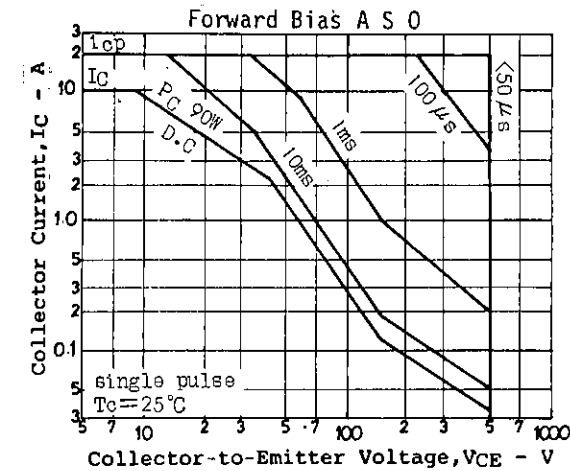
			min	typ	max	unit
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=3.5A$ $I_{B1}=-I_{B2}=1.4A$ $L=500\mu H$, clamped	500			V
Turn-on Time	t_{on}	$V_{CC}=200V$, $5I_{B1}=-2.5I_{B2}=I_C=5A$, $R_L=40\Omega$		0.5		μs
Storage Time	t_{stg}			3.0		μs
Fall Time	t_f			0.3		μs

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)





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