

SANYO

No.2236D

2SC3993

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

- High breakdown voltage, high reliability.
- Fast switching speed.
- Wide ASO.
- Adoption of MBIT process.

Absolute Maximum Ratings at Ta = 25°C

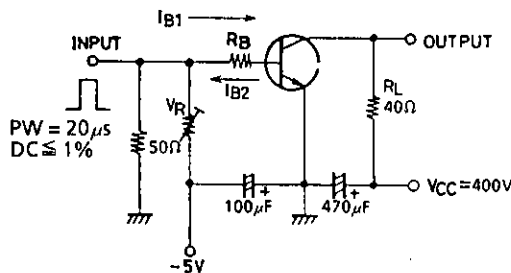
			unit
Collector-to-Base Voltage	V _{CB0}	1100	V
Collector-to-Emitter Voltage	V _{CEO}	800	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	16	A
Collector Current (Pulse)	I _{CP}	PW ≤ 300μs, Duty cycle ≤ 10%	40 A
Base Current	I _B	8	A
Collector Dissipation	P _C	T _c = 25°C	250 W
Junction Temperature	T _j		150 °C
Storage Temperature	T _{stg}		-55 to +150 °C

Electrical Characteristics at Ta = 25°C

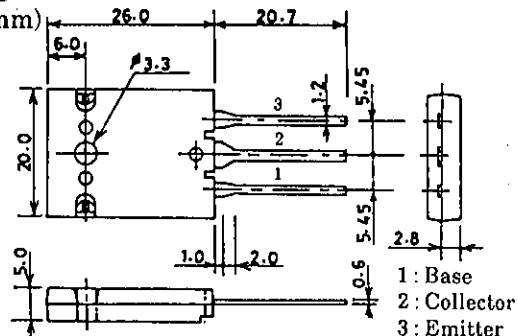
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 800V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} = 5V, I _C = 1.2A	10※		40※	
	h _{FE} (2)	V _{CE} = 5V, I _C = 6A	8			
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 1.2A		15		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, f = 1MHz		320		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 6A, I _B = 1.2A			2.0	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 6A, I _B = 1.2A			1.5	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 1mA, I _E = 0	1100			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = 10mA, R _{BE} = ∞	800			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = 1mA, I _C = 0	7			V
C-E Sustain Voltage	V _{CEX(sus)}	I _C = 8A, I _{B1} = -I _{B2} = 1.6A, L = 500μH, Clamped	800			V
Rise Time	t _{on}	V _{CC} = 400V,			0.5	μs
Storage Time	t _{stg}	5I _{B1} = -2.5I _{B2} = I _C = 10A,			3.0	μs
Fall Time	t _f	R _L = 40Ω			0.3	μs

※: The 2SC3993 are classified by 1.2A h_{FE} as follows:

10 K 20	15 L 30	20 M 40
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Switching Time Test Circuit**Package Dimensions 2048B**

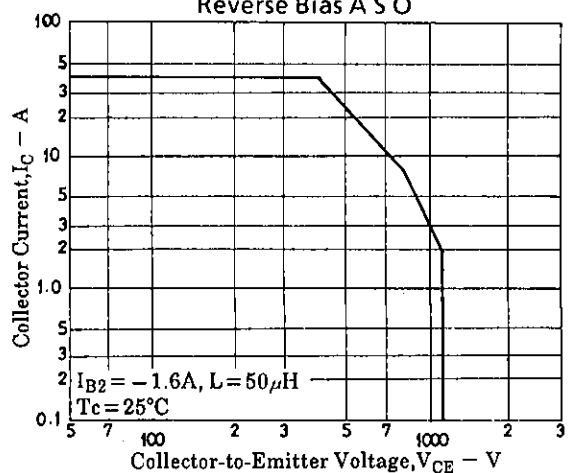
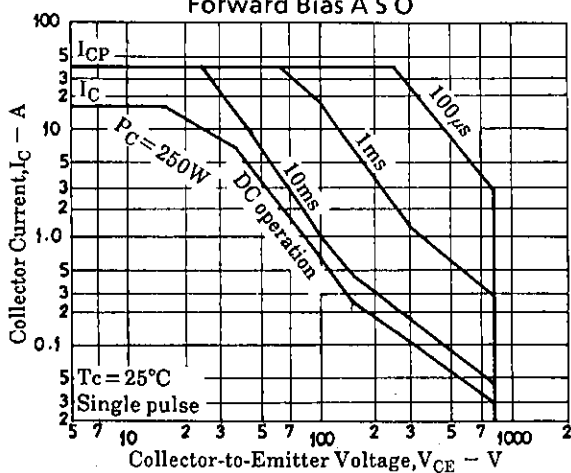
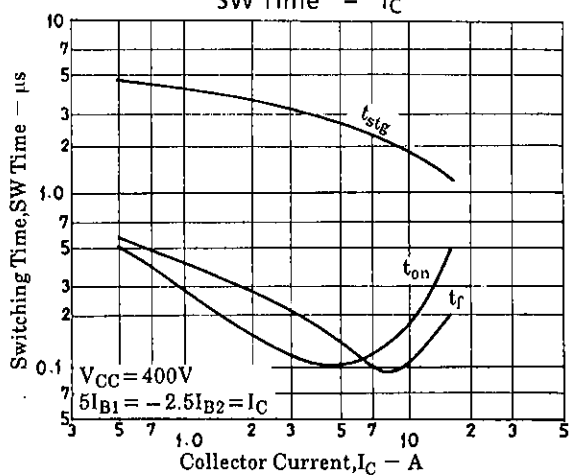
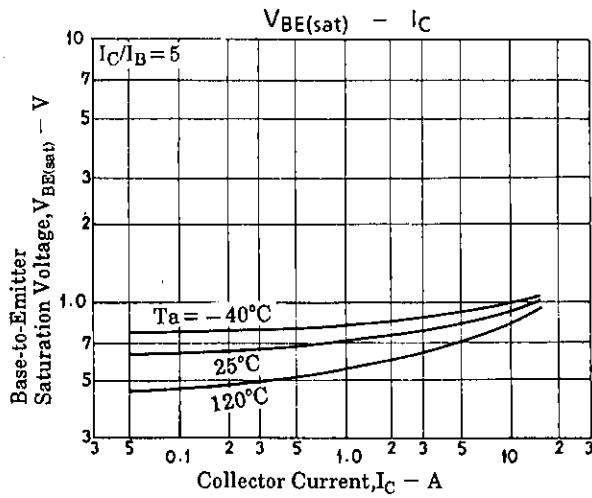
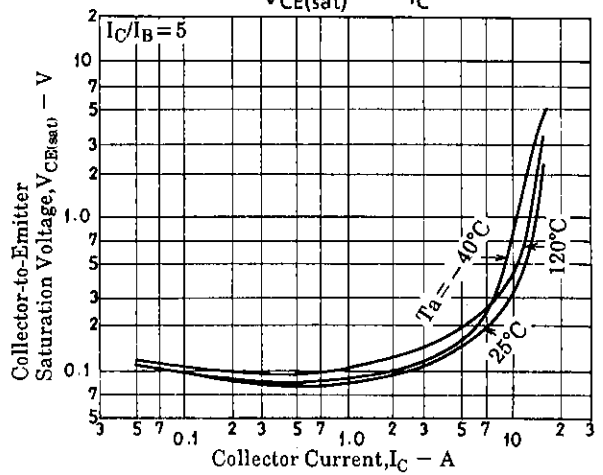
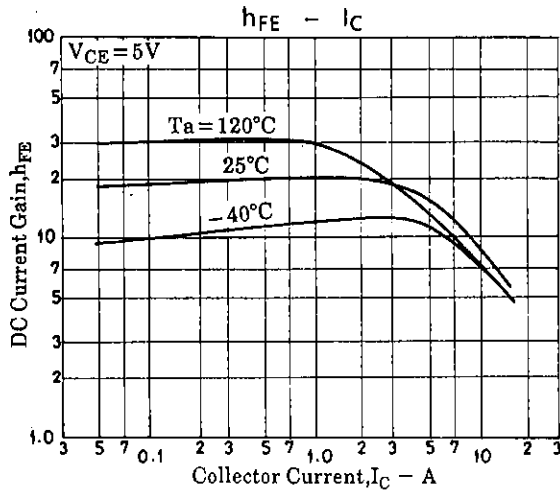
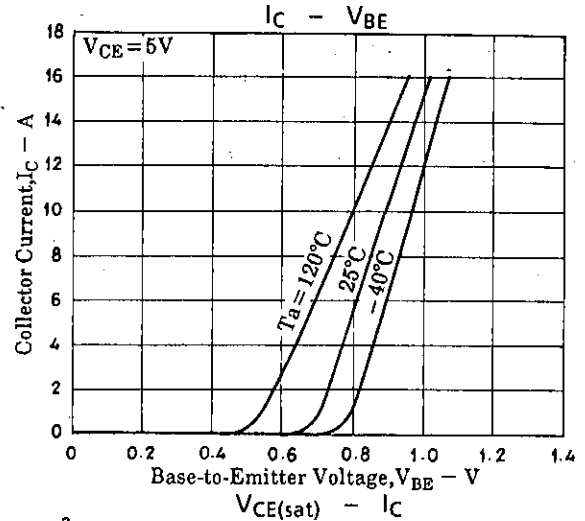
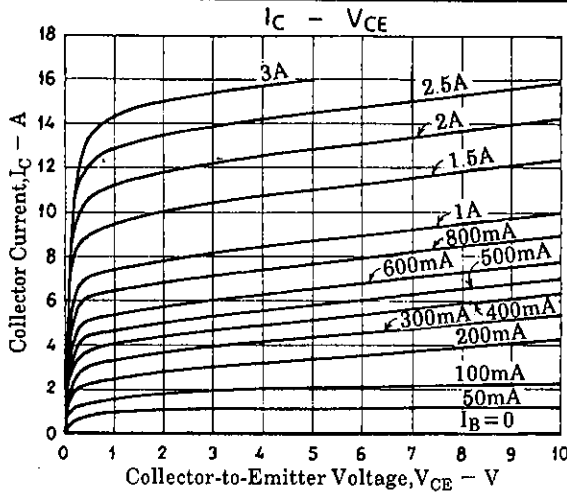
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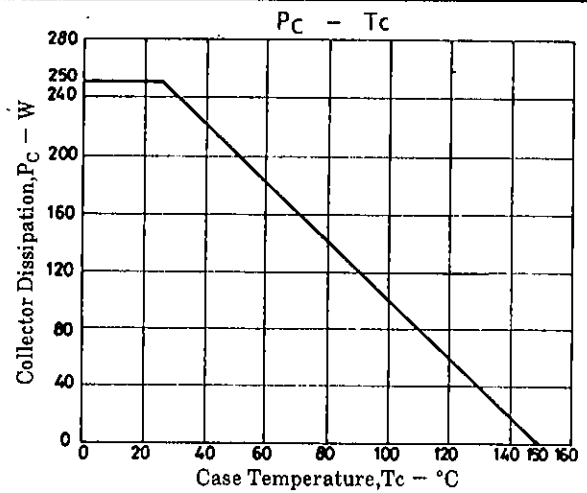
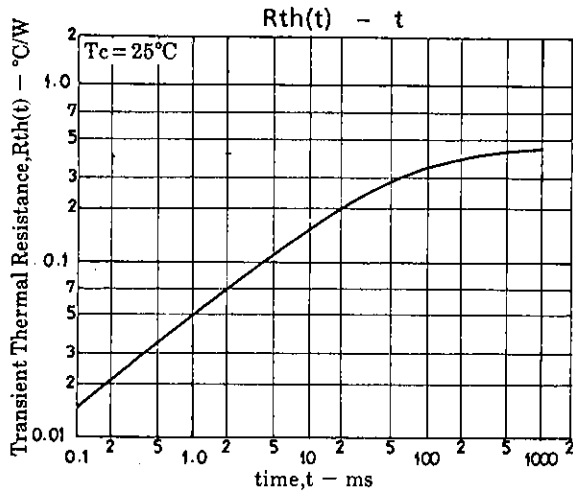


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