

SANYO

No.2235D

2SC3992

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	12	A
Collector Current (Pulse)	I _{CP}	PW ≤ 300μs, duty cycle ≤ 10%	30
Base Current	I _B	6	A
Collector Dissipation	P _C	T _c = 25°C	200
Junction Temperature	T _j		150
Storage Temperature	T _{stg}		-55 to +150

Electrical Characteristics at Ta = 25°C

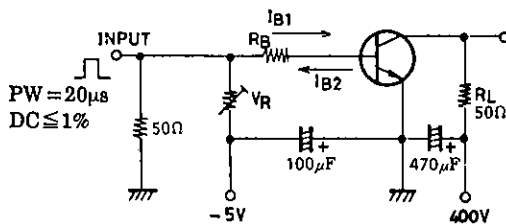
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 800V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE} (1)	V _{CE} = 5V, I _C = 0.8A	10※		40※	
	h _{FE} (2)	V _{CE} = 5V, I _C = 4A	8			
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.8A		15		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, f = 1MHz		215		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 = 5mA, R _{BE} = ∞	800			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = 1mA, I _C = 0	7			V

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※ : The 2SC3992 is classified by 0.8A h_{FE} as follows :

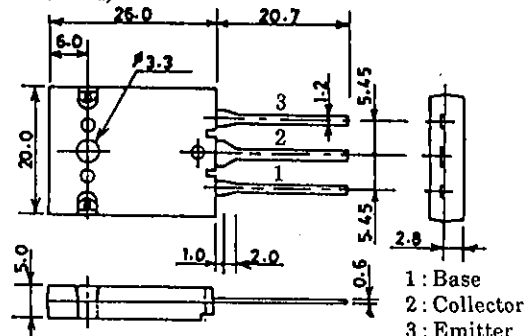
10	K	20	15	L	30	20	M	40
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Switching Time Test Circuit



Package Dimensions 2048B

(unit : mm)



1: Base
2: Collector
3: Emitter

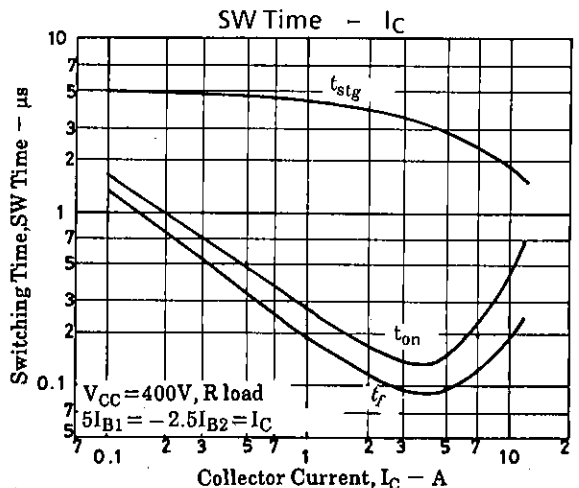
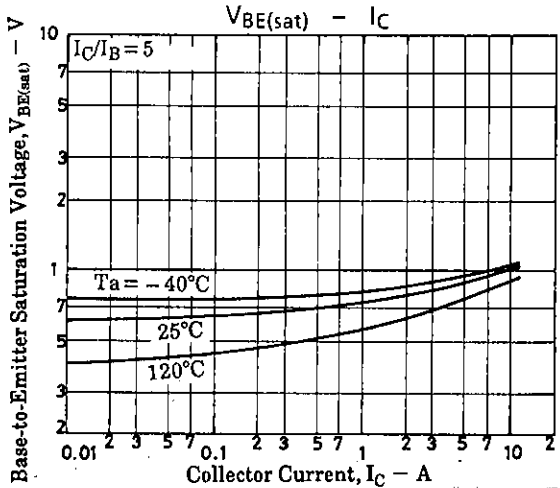
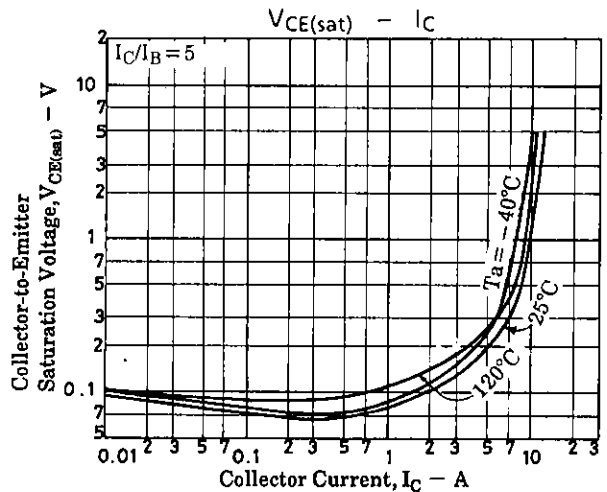
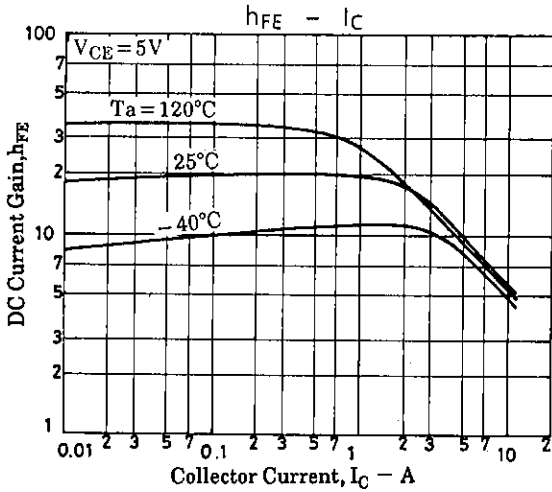
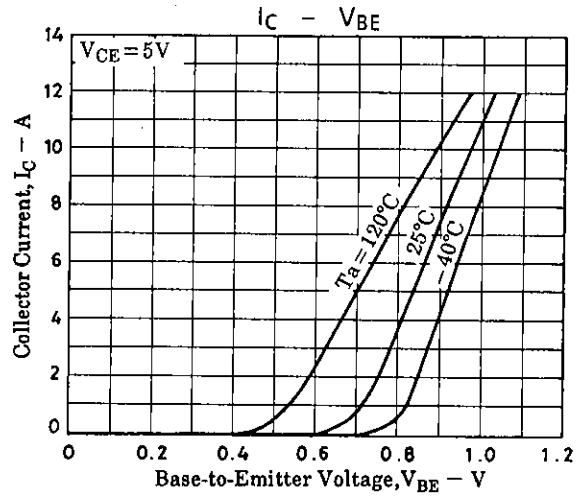
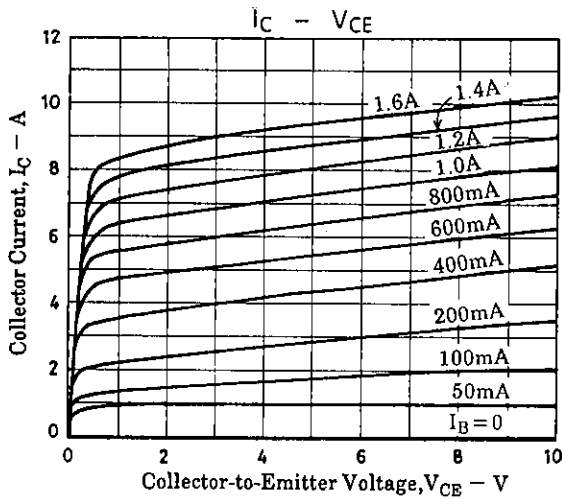
SANYO: TQ-3PBL

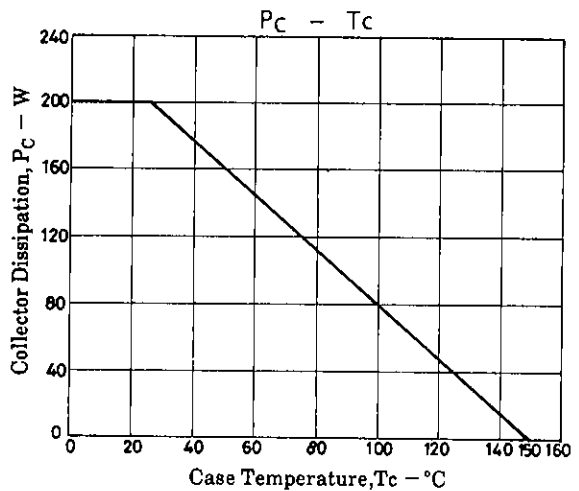
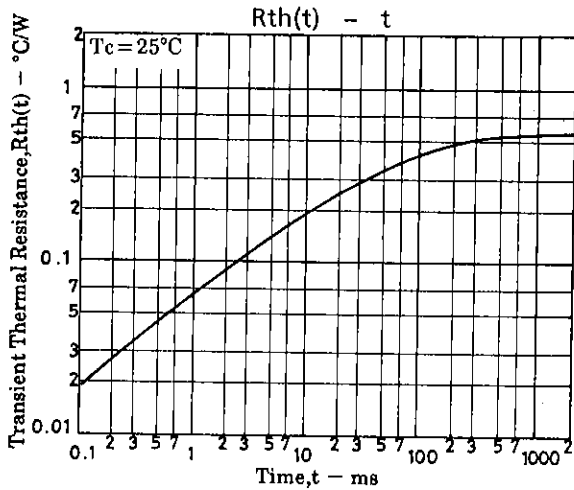
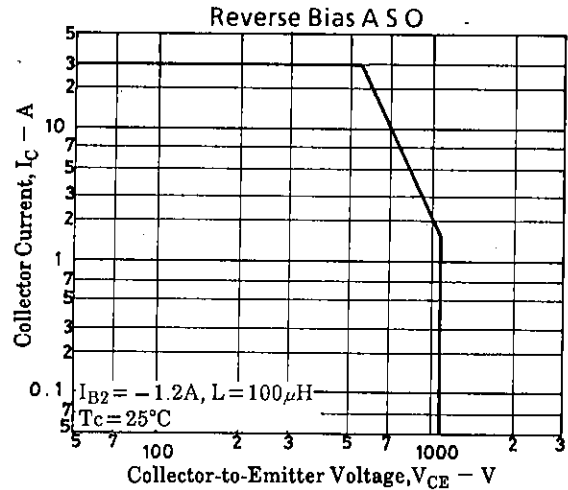
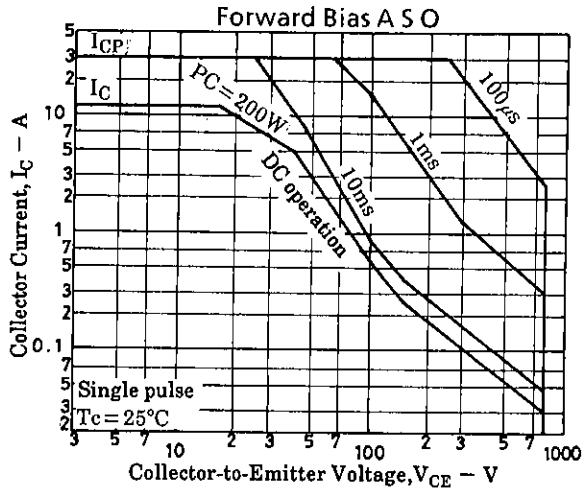
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		$I_C = 6A, I_{B1} = -I_{B2} = 1.2A$ $L = 500\mu H, \text{clamped}$	min	typ	max	unit
C-E Sustain Voltage	$V_{CE(sus)}$		800			V
Rise Time	t_{on}	$V_{CC} = 400V,$		0.5		μs
Storage Time	t_{stg}	$5I_{B1} = -2.5I_{B2} = I_C = 8A,$		3.0		μs
Fall Time	t_f	$R_L = 50\Omega$		0.3		μs





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