

SANYO	No.3330	2SC4459
		NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

- High breakdown voltage, high reliability
- Fast switching speed
- Wide ASO
- Adoption of MBIT process
- Micaless package facilitating mounting

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector-to-Base Voltage	V _{CB0}	800	V
Collector-to-Emitter Voltage	V _{CEO}	500	V
Emitter-to-Base Voltage	V _{EBO}	7	V
Collector Current	I _C	10	A
Peak Collector Current	i _{cp}	20	A
Base Current	I _B	3	A
Collector Dissipation	P _C	3	W
		50	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

PW ≤ 300μs, duty cycle ≤ 10%

Tc = 25°C

Electrical Characteristics at Ta = 25°C

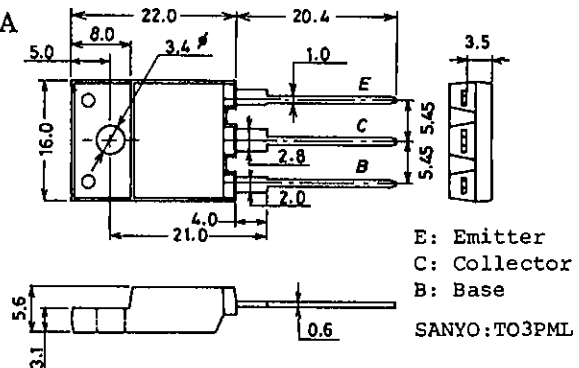
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = 500V, I _E = 0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 5V, I _C = 0			10	μA
DC Current Gain	h _{FE(1)}	V _{CE} = 5V, I _C = 0.8A	15*		50*	
	h _{FE(2)}	V _{CE} = 5V, I _C = 4A	8			
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 0.8A		18		MHz
Output Capacitance	c _{ob}	V _{CB} = 10V, f = 1MHz		50		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 4A, I _B = 0.8A			1.0	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 4A, I _B = 0.8A			1.5	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 1mA, I _E = 0	800			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = 5mA, R _{BE} = ∞	500			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 = 3.5A, I _{B1} = -I _{B2} = 1.4A, L = 500μH, clamped	500			V

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* : For the h_{FE(1)} of the 2SC4459, specify two ranks or more in principle.

15 L 30	20 M 40	30 N 50
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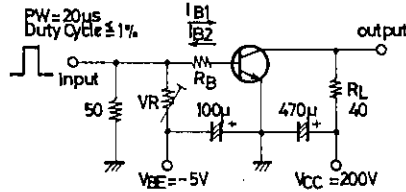
Package Dimensions 2039A
(unit: mm)



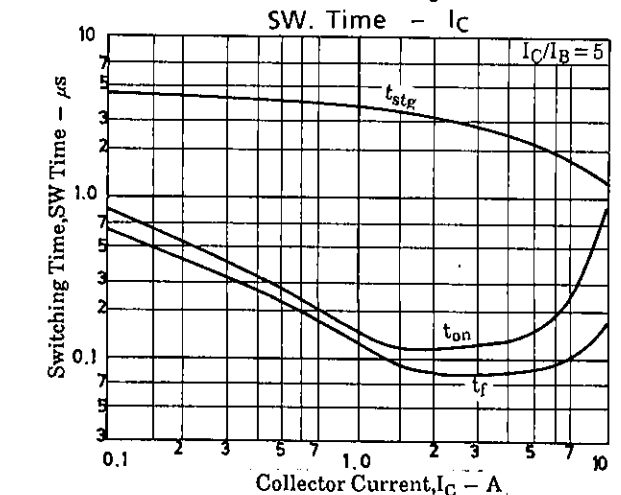
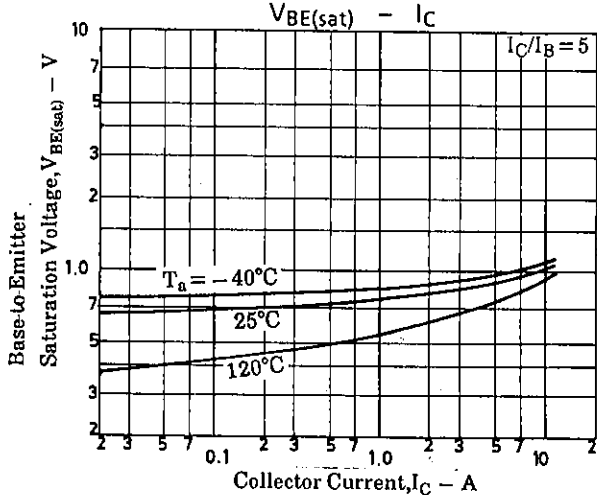
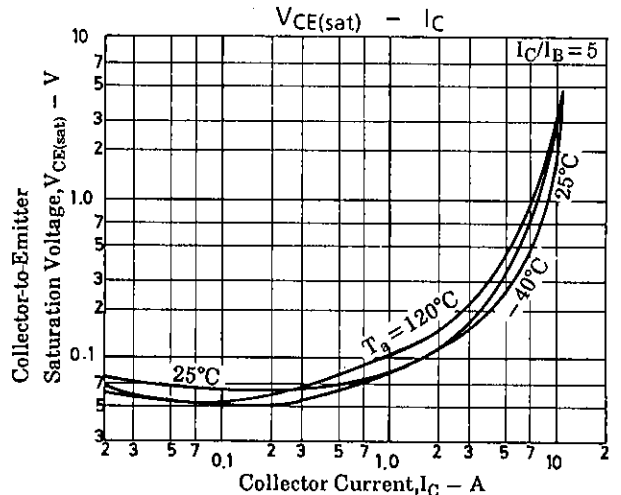
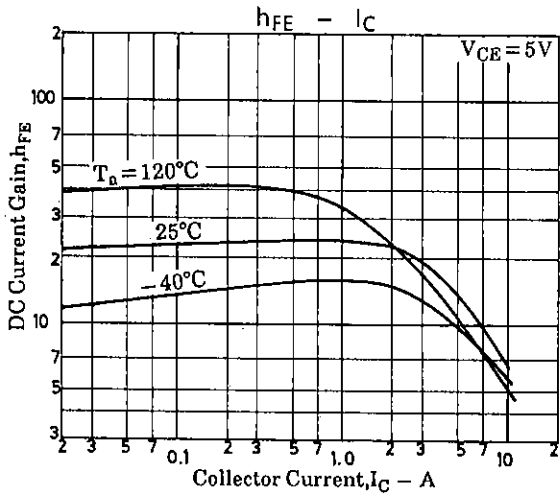
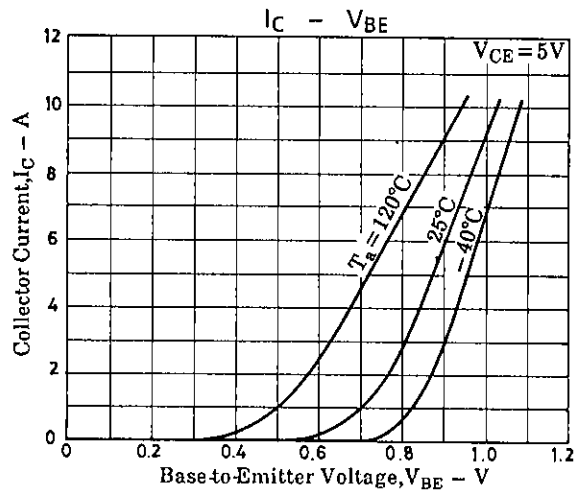
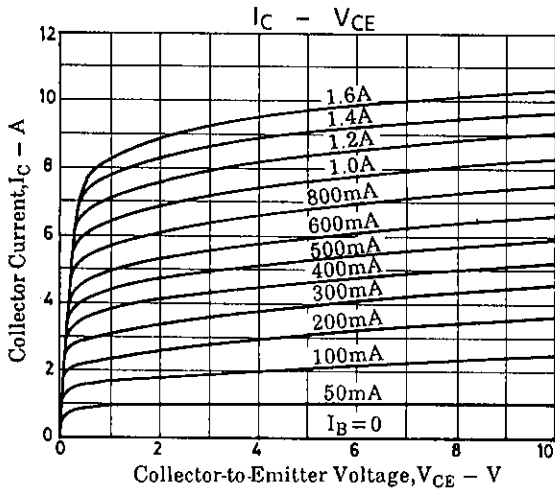
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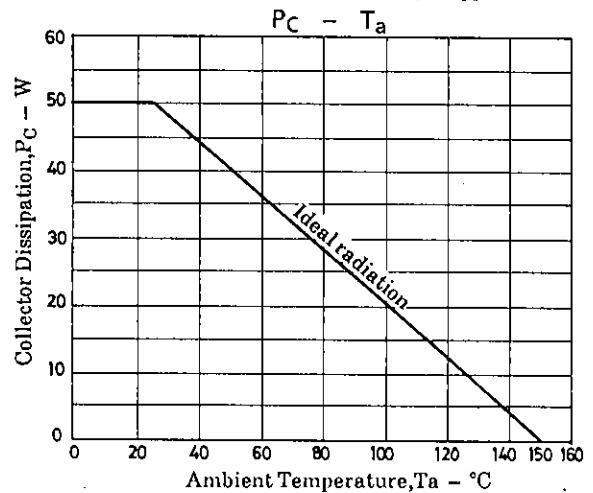
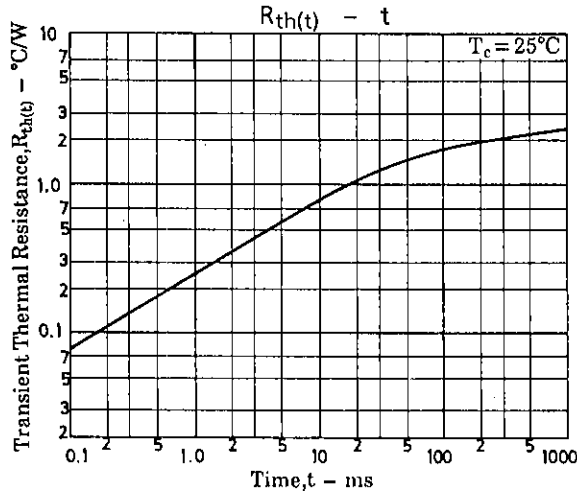
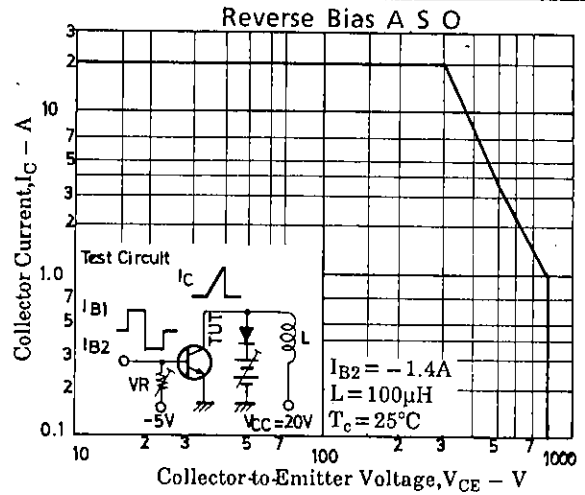
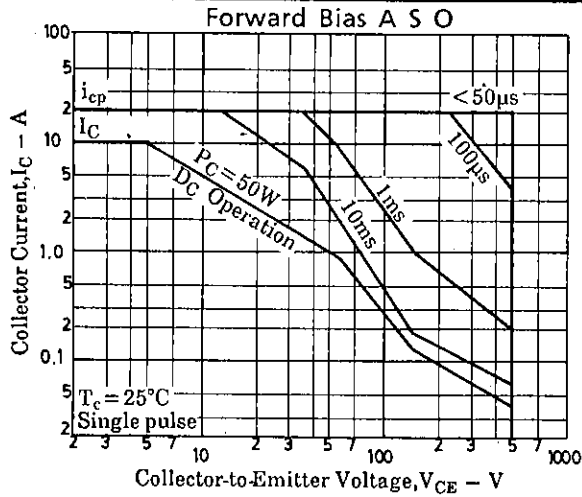
			min	typ	max	unit
Turn-ON time	t_{on}	$V_{CC} = 200V,$ $5I_{B1} = -2.5I_{B2} = I_C = 5A,$ $R_L = 40\Omega$			0.5	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				0.3	μs

Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)





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