

<b>SANYO</b>	No.3332	2SC4461
		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 <sub>CB0</sub>	800	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>	500	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	7	V
Collector Current	I <sub>C</sub>	25	A
Peak Collector Current	i <sub>cp</sub>	40	A
Base Current	I <sub>B</sub>	8	A
Collector Dissipation	P <sub>C</sub>	3	W
		T <sub>c</sub> = 25°C	
Junction Temperature	T <sub>j</sub>	65	W
Storage Temperature	T <sub>stg</sub>	150	°C
		-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

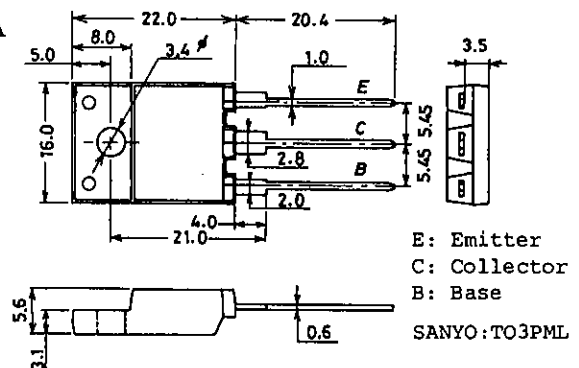
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = 500V, I <sub>E</sub> = 0	min	typ	max unit
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0			10 μA
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 2.4A	15*		50*
	h <sub>FE(2)</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 12A	8		
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 2.4A		18	MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = 10V, f = 1MHz		260	pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 12A, I <sub>B</sub> = 2.4A			1.0 V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 12A, I <sub>B</sub> = 2.4A			1.5 V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 1mA, I <sub>E</sub> = 0	800		V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 5mA, R <sub>BE</sub> = ∞	500		V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 1mA, I <sub>C</sub> = 0	7		V
C-E Sustain Voltage	V <sub>CEX(sus)</sub>	I <sub>C</sub> = 10A, I <sub>B1</sub> = -I <sub>B2</sub> = 2A, L = 200μH, clamped	500		V

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\* : For the h<sub>FE(1)</sub> of the 2SC4461, specify two ranks or more in principle.

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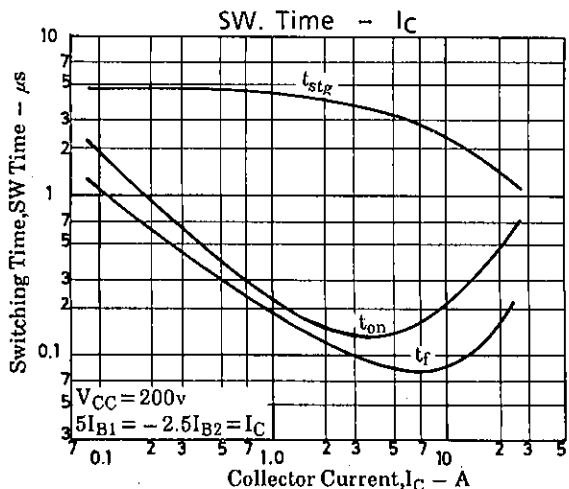
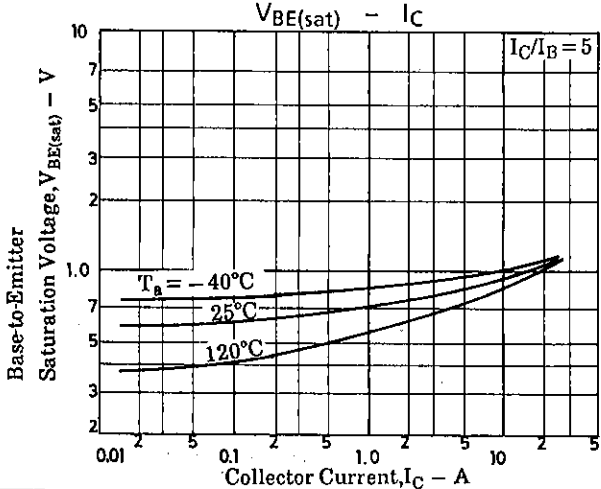
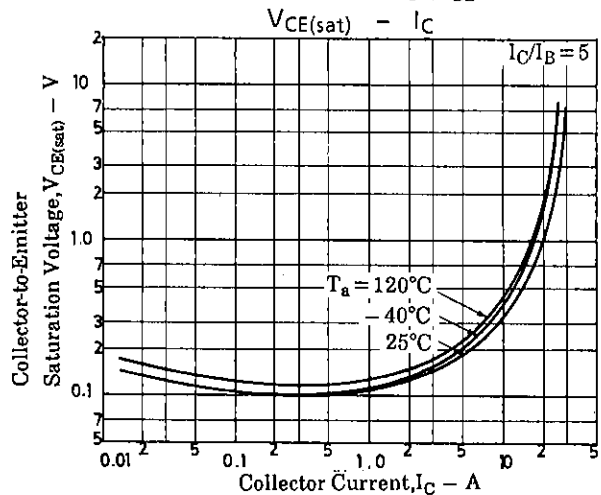
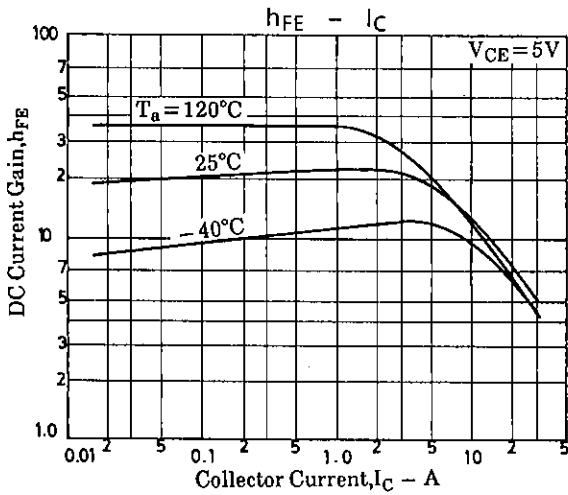
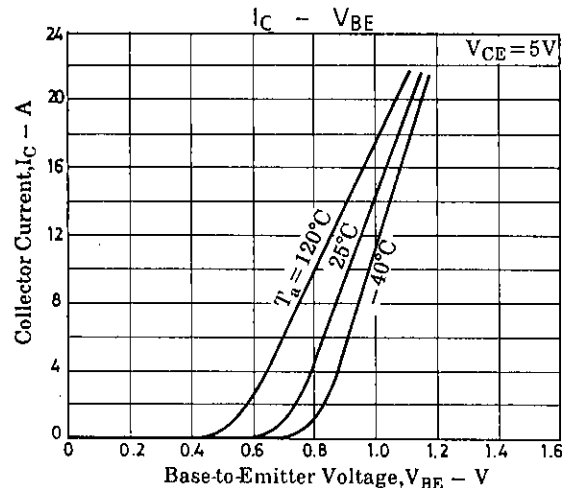
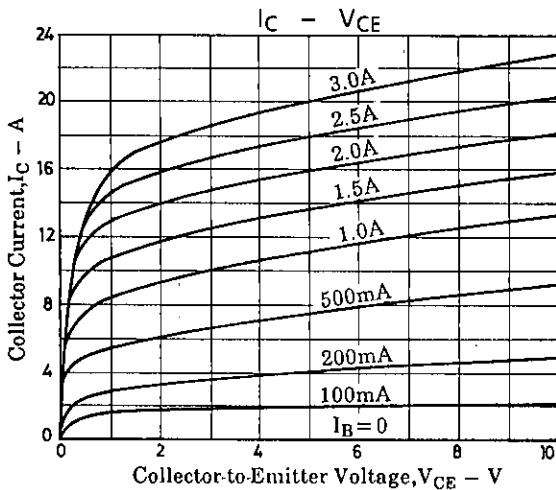
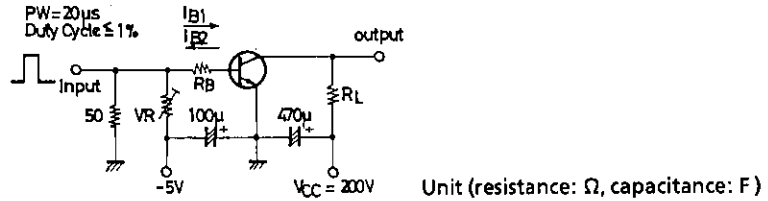
**Package Dimensions 2039A**  
(unit : mm)

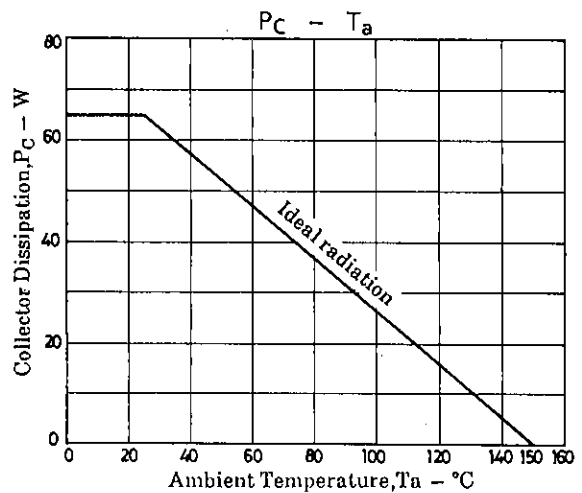
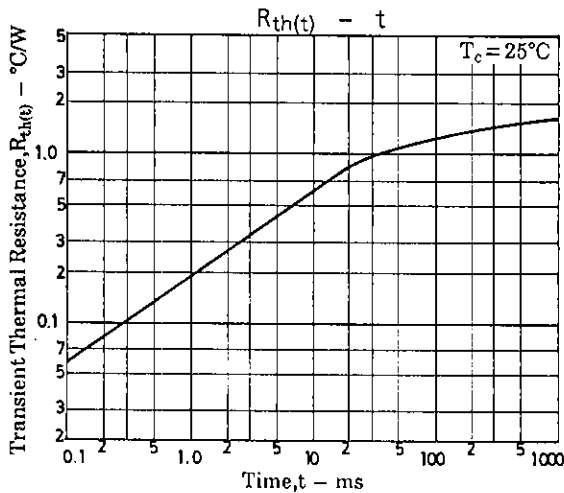
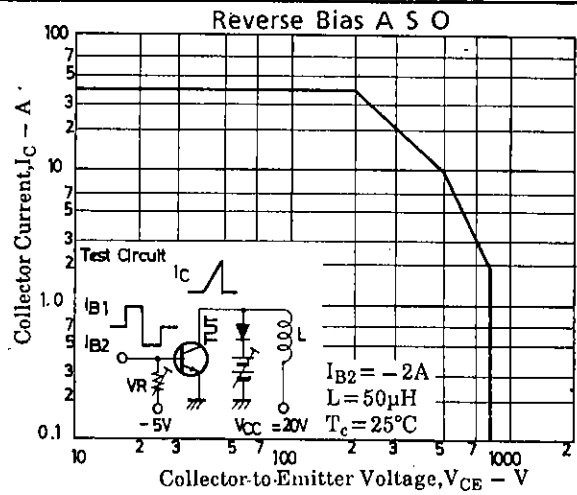
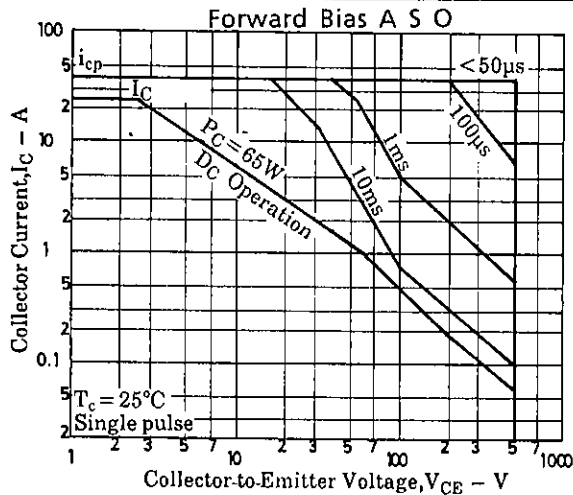


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			min	typ	max	unit
Turn-ON time	$t_{on}$	$V_{CC} = 200V,$ $5I_{B1} = -2.5I_{B2} = I_C = 14A,$ $R_L = 14.3\Omega$			0.5	$\mu S$
Storage Time	$t_{stg}$				3.0	$\mu S$
Fall Time	$t_f$				0.3	$\mu S$

Switching Time Test Circuit





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