

SANYO

No.2852

2SC4429

NPN Triple Diffused Planar Silicon Transistor
Switching Regulator Applications

Features

- High breakdown voltage, high reliability
- Fast switching speed (t_f : 0.1 μ s typ)
- Wide ASO
- Adoption of MBIT process
- Micaless package facilitating easy mounting

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	1100	V
Collector-to-Emitter Voltage	V_{CE0}	800	V
Emitter-to-Base Voltage	V_{EB0}	7	V
Collector Current	I_C	8	A
Peak Collector Current	i_{cp}	$PW \leq 300\mu\text{s}, \text{duty cycle} \leq 10\%$	25
Base Current	I_B	4	A
Collector Dissipation	P_C	3	W
		$T_C = 25^\circ\text{C}$	60
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = 800\text{V}, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
DC Current Gain	$h_{FE(1)*}$	$V_{CE} = 5\text{V}, I_C = 0.6\text{A}$	10		40	
	$h_{FE(2)}$	$V_{CE} = 5\text{V}, I_C = 3\text{A}$	8			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$			1.5	V
Gain-Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 0.6\text{A}$		15		MHz
Output Capacitance	c_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		155		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 5\text{mA}, R_{BE} = \infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C = 4\text{A}, I_{B1} = 0.8\text{A}$ $I_{B2} = -0.8\text{A}, L = 1\text{mH}, \text{clamped}$	800			V

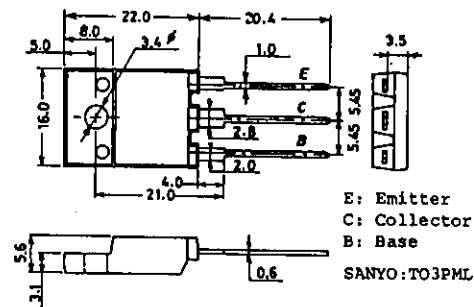
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*: The $h_{FE(1)}$ of the 2SC4429 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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Package Dimensions 2039

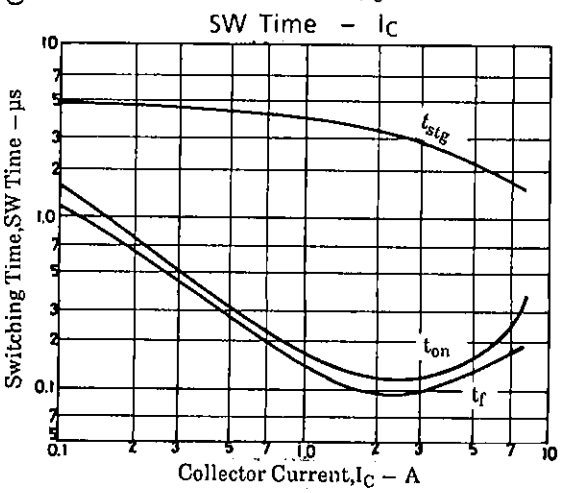
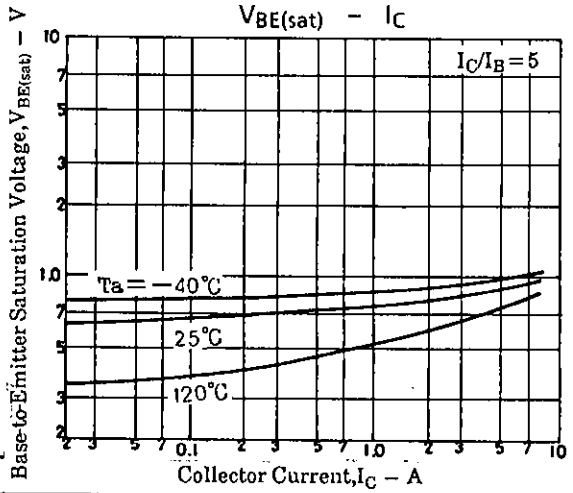
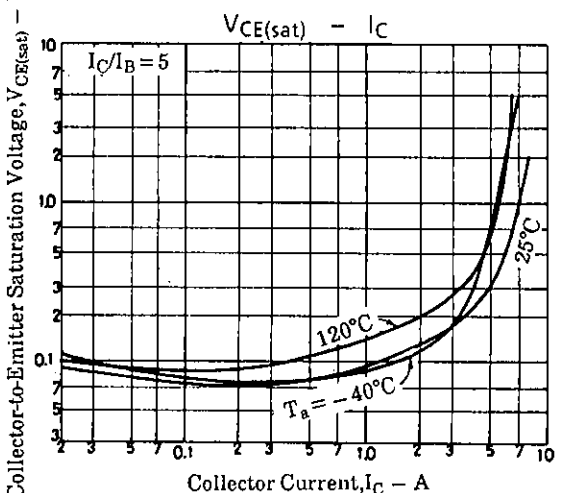
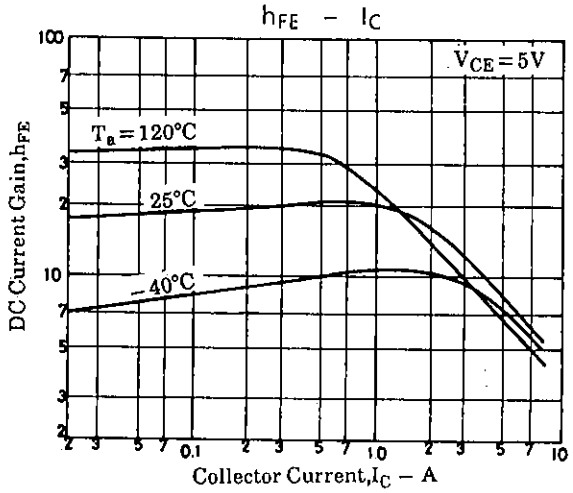
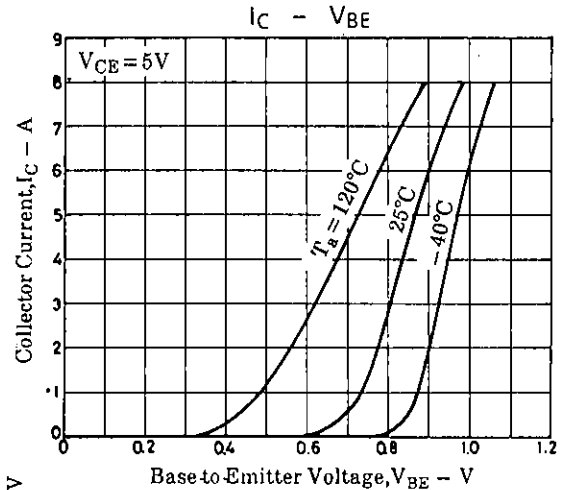
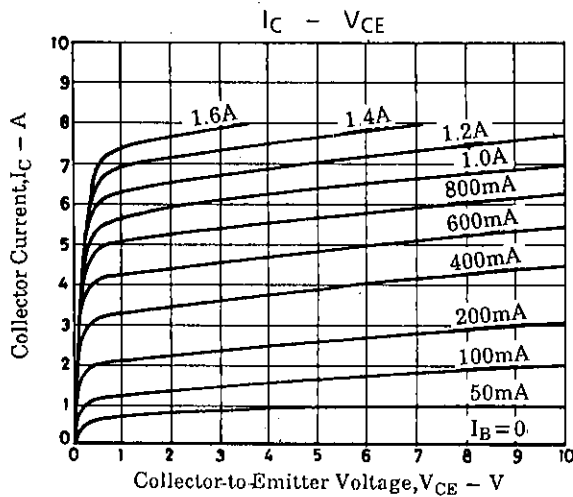
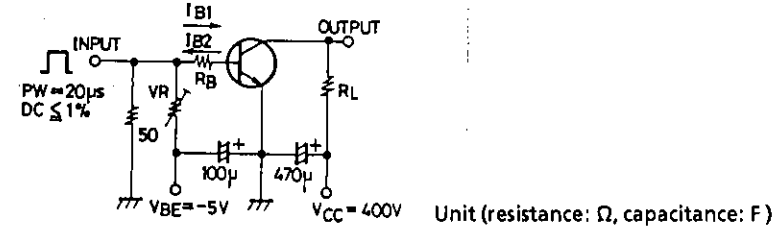
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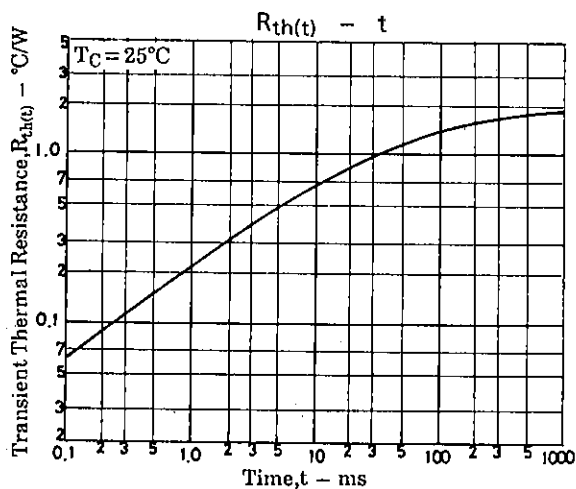
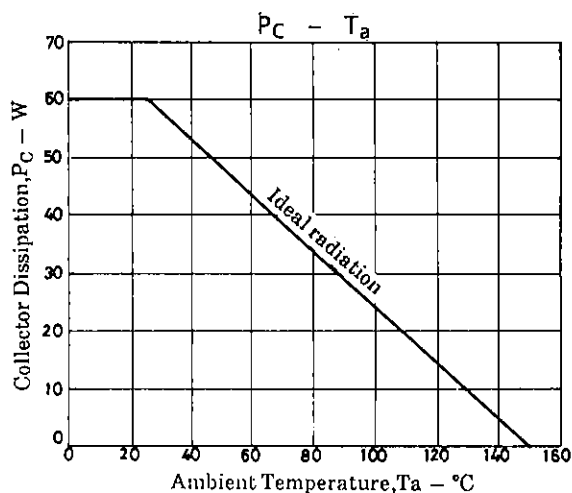
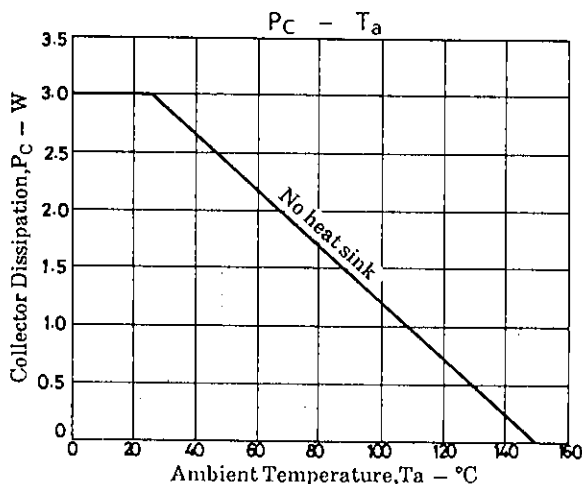
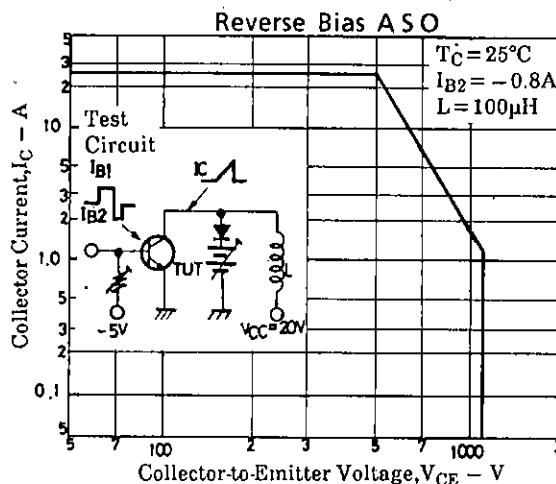
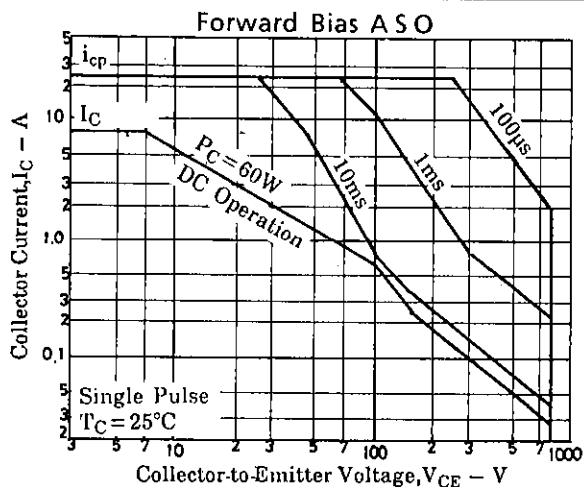


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			min	typ	max	unit
Turn-on Time	t_{on}	$I_C = 6A, I_{B1} = 1.2A$ $I_{B2} = -2.4A, R_L = 66.7\Omega$ $V_{CC} = 400V$			0.5	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				0.3	μs

Switching Time Test Circuit





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