

SANYO	No.2761	2SC4222
	NPN Triple Diffused Planar Silicon Transistor Switching Regulator Applications	

Features

- . High breakdown voltage, high reliability
- . Fast switching speed ($t_f: 0.1\mu s$ typ)
- . Wide ASO
- . Adoption of MBIT process
- . Suitable for sets whose height is restricted

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

			unit	
Collector to Base Voltage	V_{CB0}	800	V	
Collector to Emitter Voltage	V_{CE0}	500	V	
Emitter to Base Voltage	V_{EB0}	7	V	
Collector Current	I_C	5	A	
Peak Collector Current	i_{cp} $PW \leq 300\mu s, duty\ cycle \leq 10\%$	10	A	
Base Current	I_B	2	A	
Collector Dissipation	P_C	$T_a=25^\circ C$	1.65	W
		$T_c=25^\circ C$	50	W
Junction Temperature	T_J	150	$^\circ C$	
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$	

Electrical Characteristics at $T_a=25^\circ C$

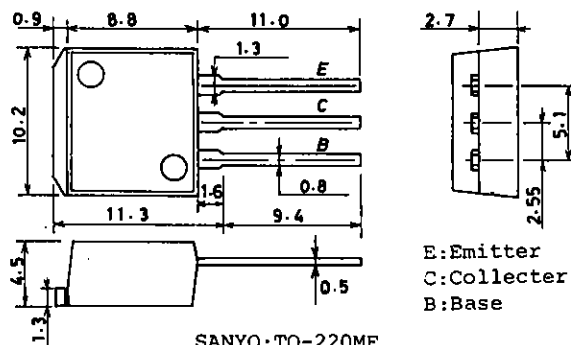
			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=500V, I_E=0$			10	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.6A$	15*		50*	
			8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.6A$		18		MHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1MHz$		80		pF

Continued on next page.

*: The $h_{FE(1)}$ of the 2SC4222 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more in principle.

15	L	30	20	M	40	30	N	50
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Package Dimensions 2049
(unit: mm)

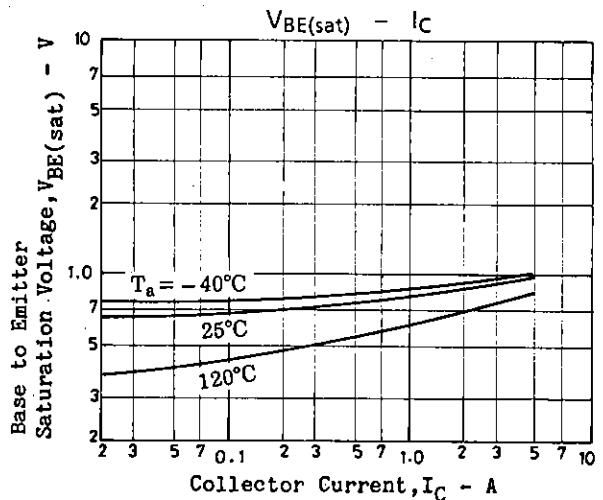
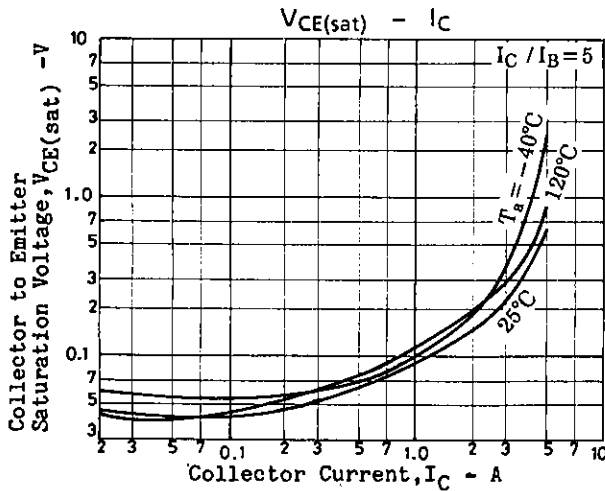
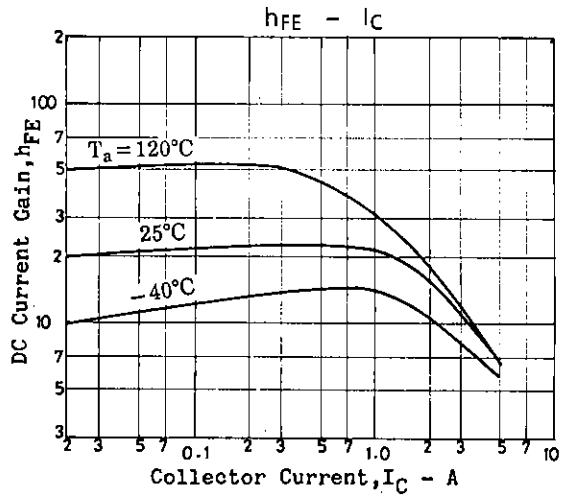
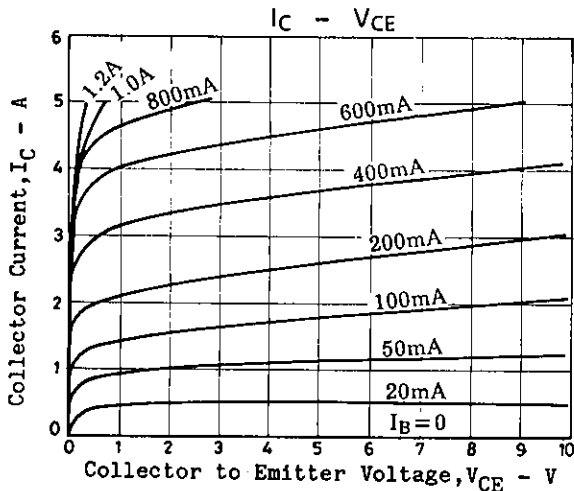
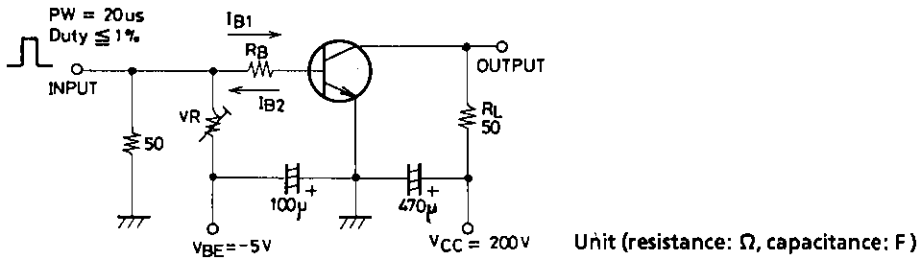


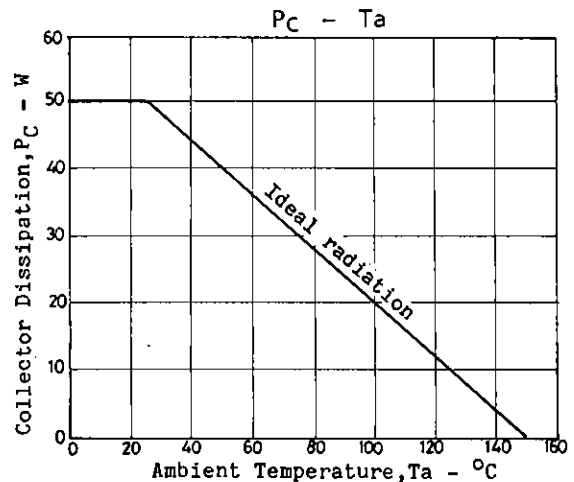
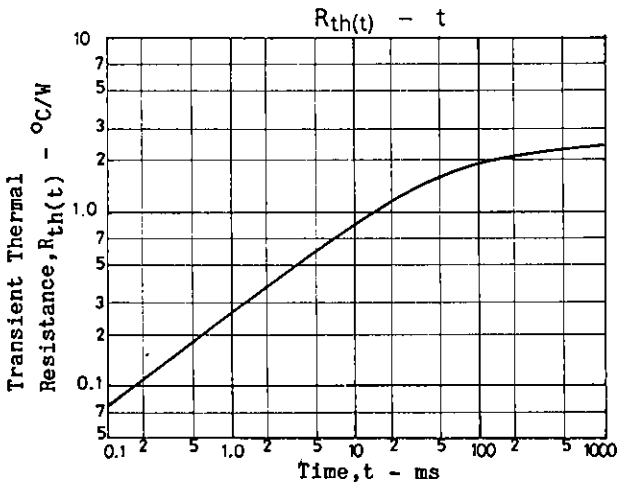
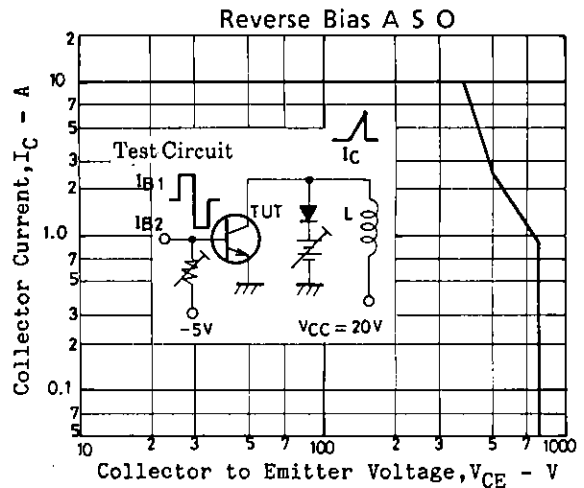
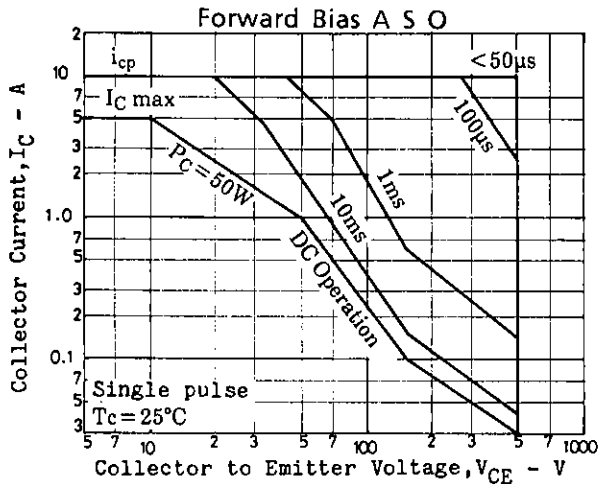
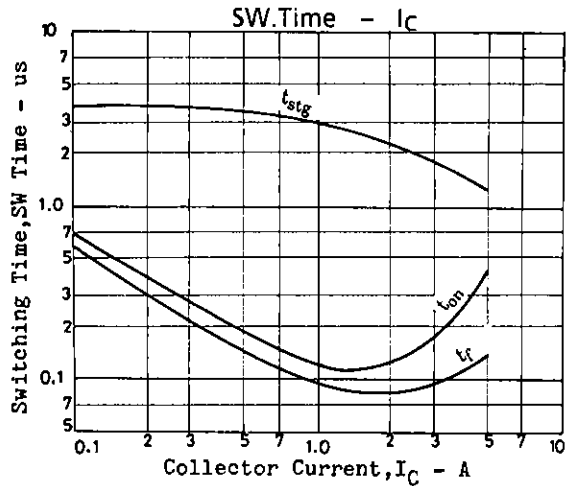
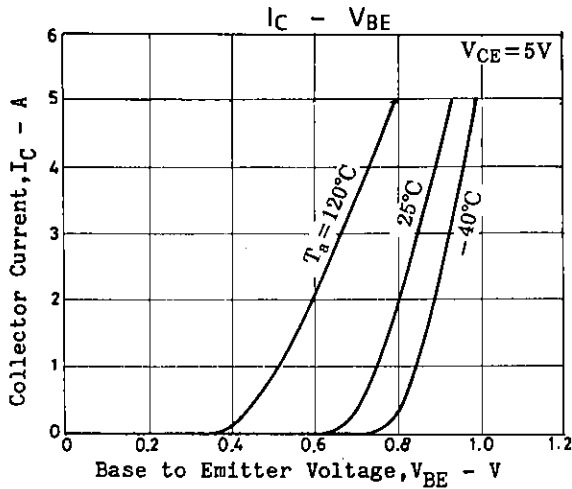
E: Emitter
C: Collector
B: Base

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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=3A, I_B=0.6A$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=3A, I_B=0.6A$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	800			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	500			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEO(sus)}$	$I_C=5A, I_B=1A, L=50\mu H$	500			V
	$V_{CEX(sus)}$	$I_C=2.5A, I_{B1}=-I_{B2}=1A, L=1mH, \text{clamped}$	500			V
Rise Time	t_{on}	$I_C=4A, I_{B1}=0.8A, I_{B2}=-1.6A, R_L=50\text{ohms}, V_{CC}=200V$			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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