	No.2762	<h1 style="margin: 0;">2SC4223</h1> <p style="margin: 0;">NPN Triple Diffused Planar Silicon Transistor</p> <p style="margin: 0;">Switching Regulator Applications</p>
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**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 Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	1100	V
Collector to Emitter Voltage	V <sub>CE0</sub>	800	V
Emitter to Base Voltage	V <sub>EB0</sub>	7	V
Collector Current	I <sub>C</sub>	1.5	A
Peak Collector Current	i <sub>cp</sub>	PW $\leq$ 300 $\mu$ s, duty cycle $\leq$ 10% 5 A	
Base Current	I <sub>B</sub>	0.8	A
Collector Dissipation	P <sub>C</sub>	Ta=25°C	1.65 W
		Tc=25°C	40 W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

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

			min	typ	max	unit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	$\mu$ A
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			10	$\mu$ A
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1A	10*		40*	
		V <sub>CE</sub> =5V, I <sub>C</sub> =0.5A	8			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0.1A		15		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		35		pF

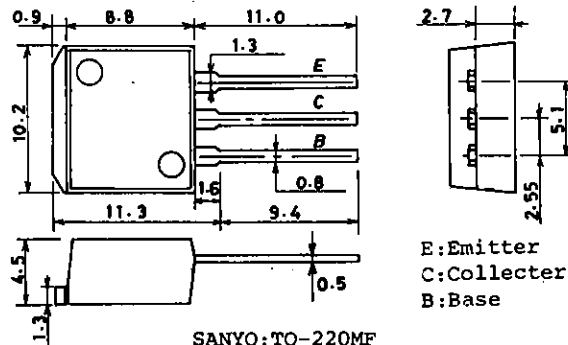
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\*: The h<sub>FE(1)</sub> of the 2SC4223 is classified as follows. When specifying the h<sub>FE(1)</sub> rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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**Package Dimensions 2049**

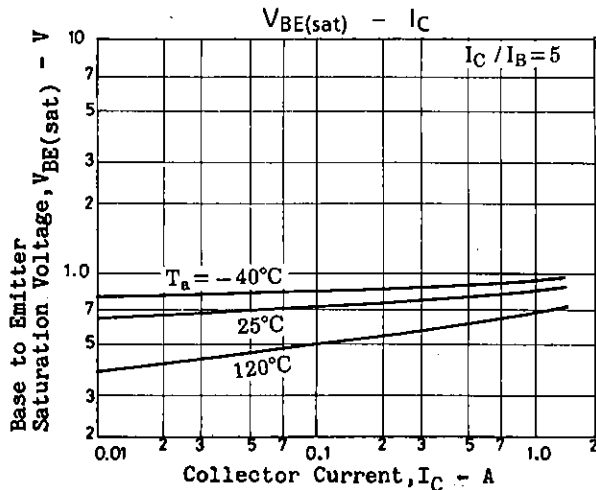
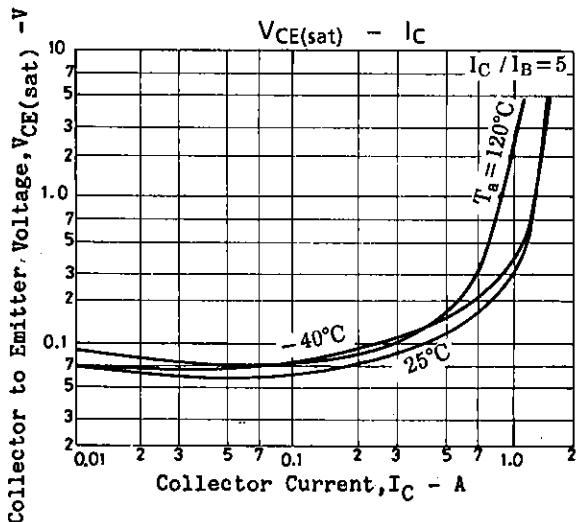
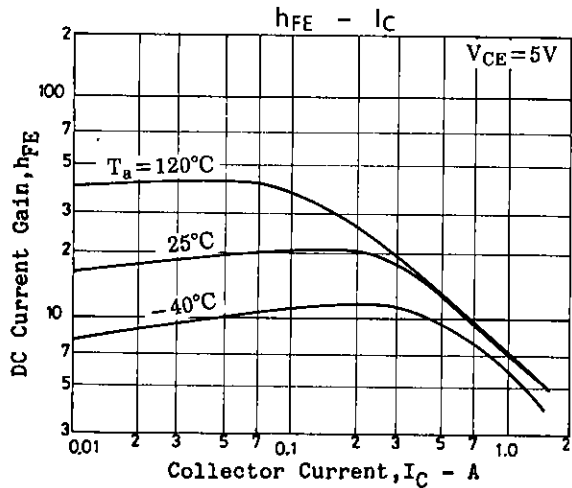
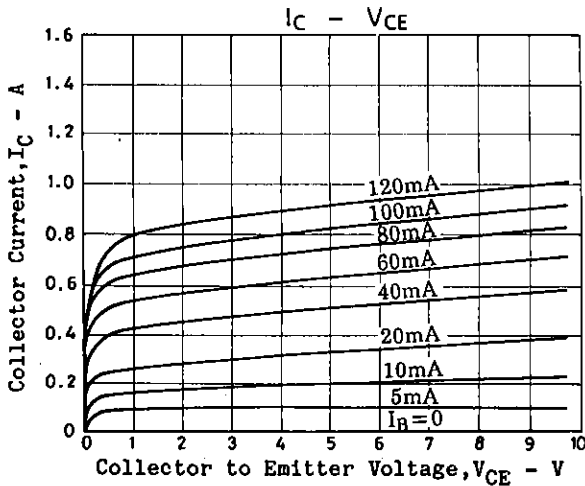
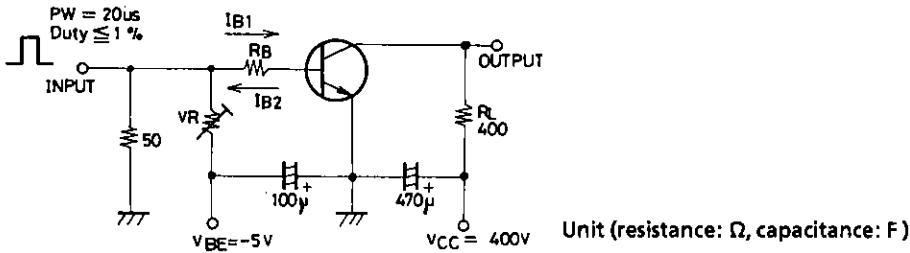
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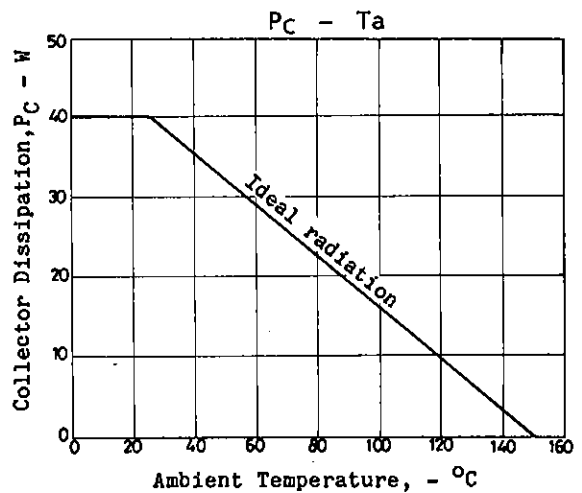
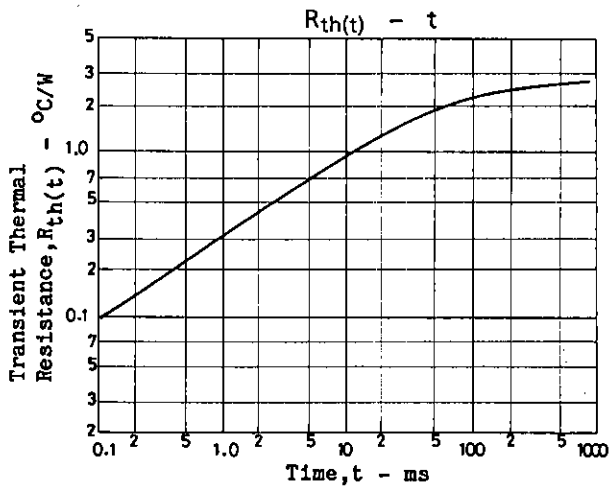
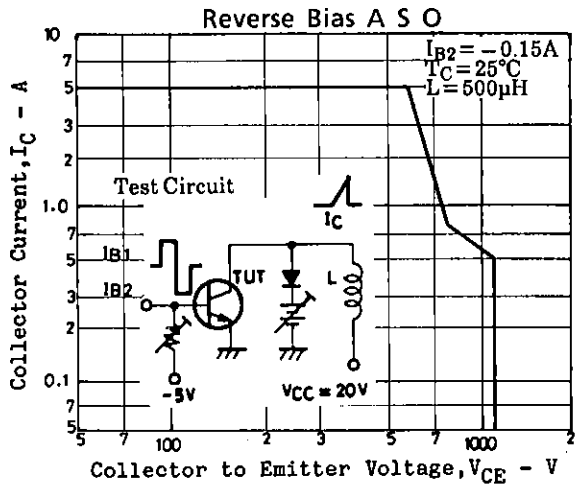
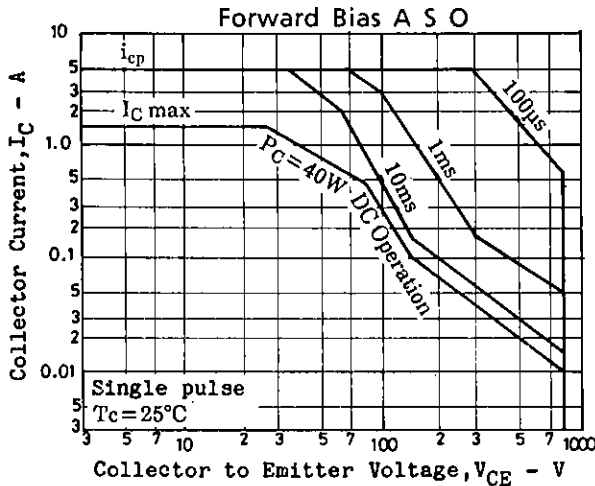
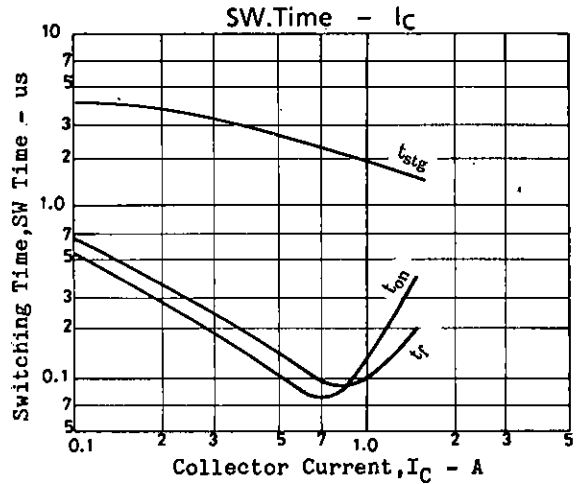
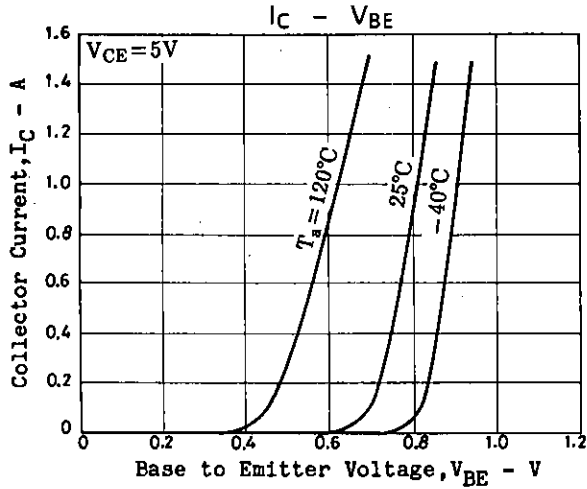


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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=0.75A, I_B=0.15A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=0.75A, I_B=0.15A$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=0.75A,$ $I_{B1}=-I_{B2}=0.15A,$ $L=5mH, \text{clamped}$	800			V
Rise Time	$t_{on}$	$I_C=1A, I_{B1}=0.2A,$ $I_{B2}=-0.4A, R_L=400\text{ohms},$ $V_{CC}=400V$			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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