	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 $T_a=25^\circ C$

			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	1.5	A
Peak Collector Current	i_{cp} $PW \leq 300\mu s, duty\ cycle \leq 10\%$	5	A
Base Current	I_B	0.8	A
Collector Dissipation	P_C $T_a=25^\circ C$	1.65	W
		$T_c=25^\circ C$	40
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_{CBO} $V_{CB}=800V, I_E=0$				10	μA
Emitter Cutoff Current	I_{EBO} $V_{EB}=5V, I_C=0$				10	μA
DC Current Gain	$h_{FE(1)}$ $V_{CE}=5V, I_C=0.1A$		10*		40*	
		$h_{FE(2)}$ $V_{CE}=5V, I_C=0.5A$	8			
Gain-Bandwidth Product	f_T $V_{CE}=10V, I_C=0.1A$			15		MHz
Output Capacitance	c_{ob} $V_{CB}=10V, f=1MHz$			35		pF

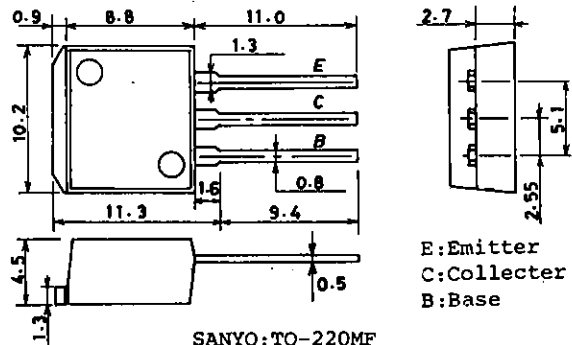
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*: The $h_{FE(1)}$ of the 2SC4223 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more in principle.

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

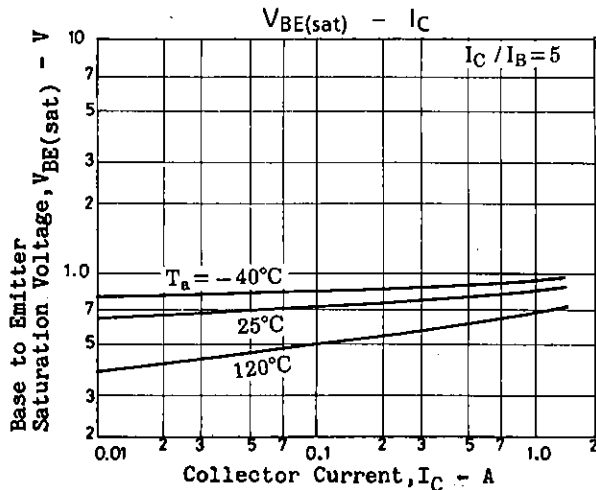
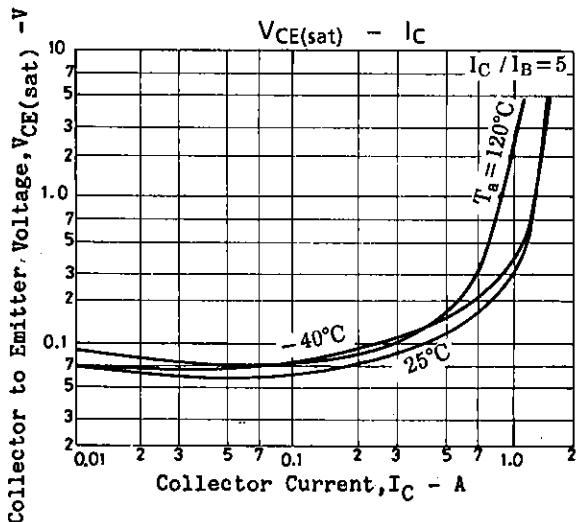
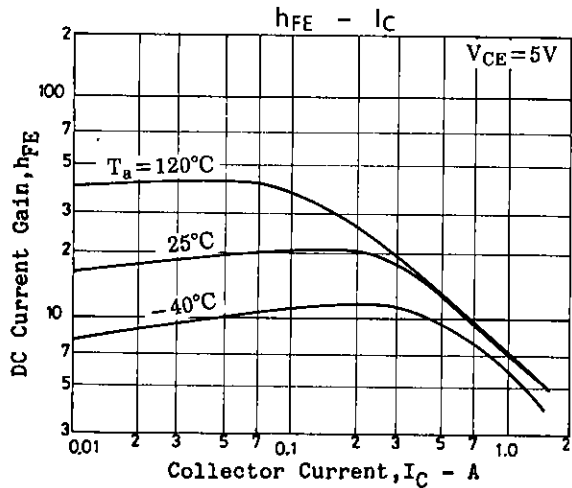
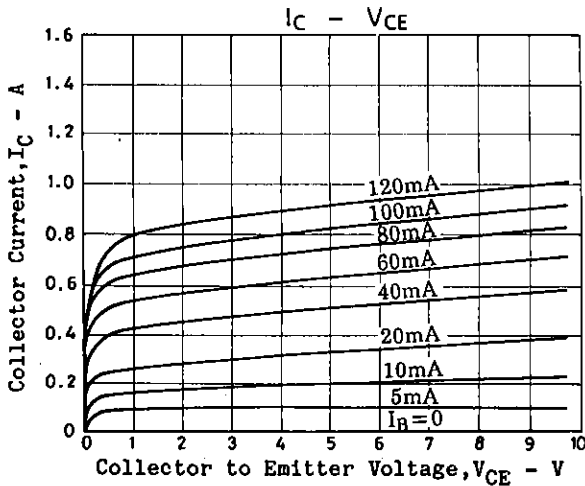
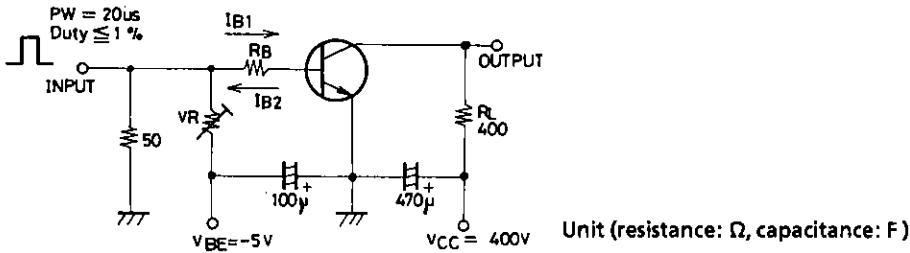
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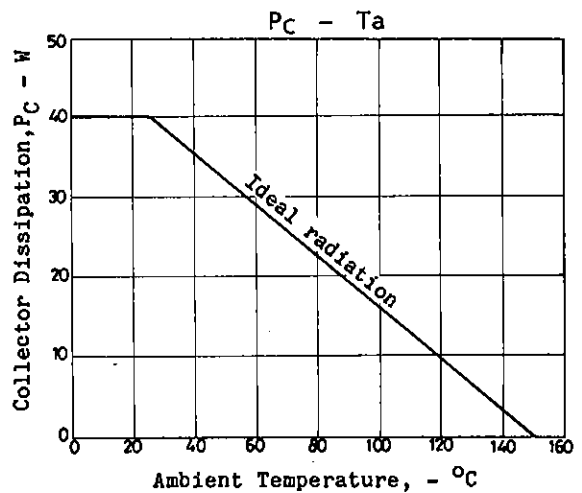
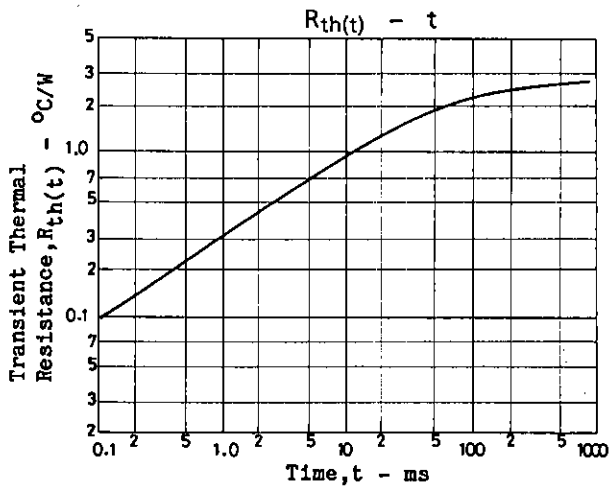
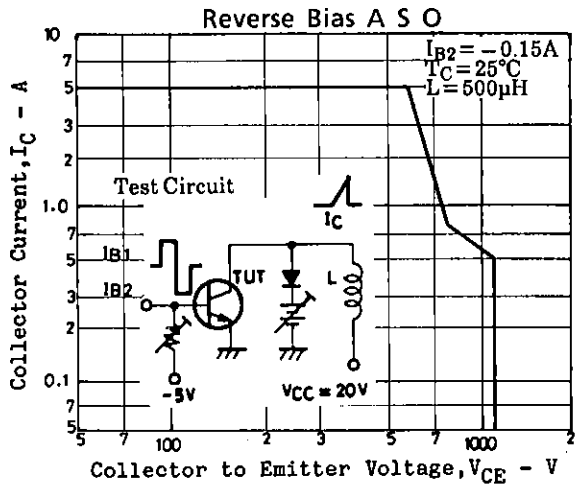
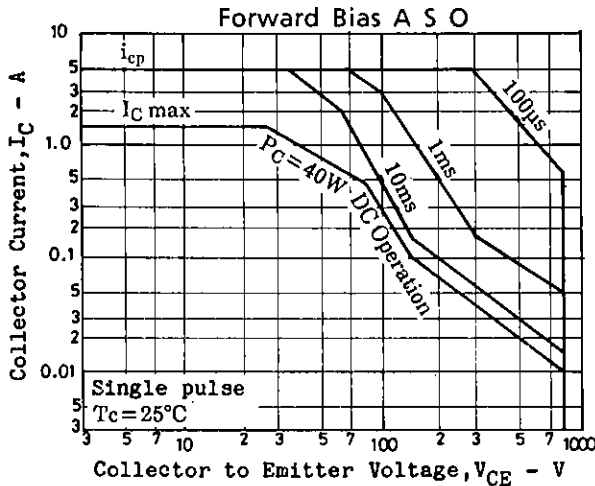
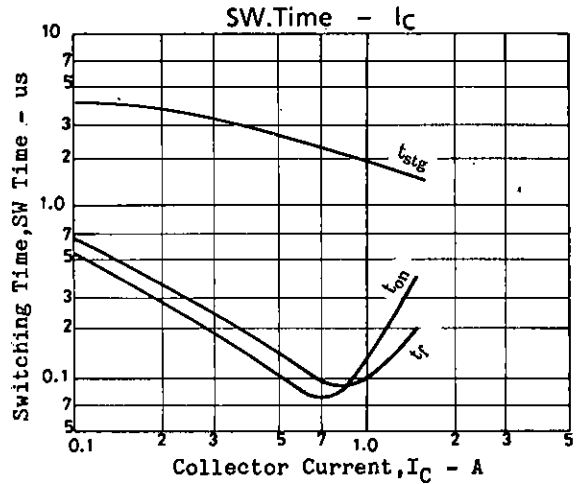
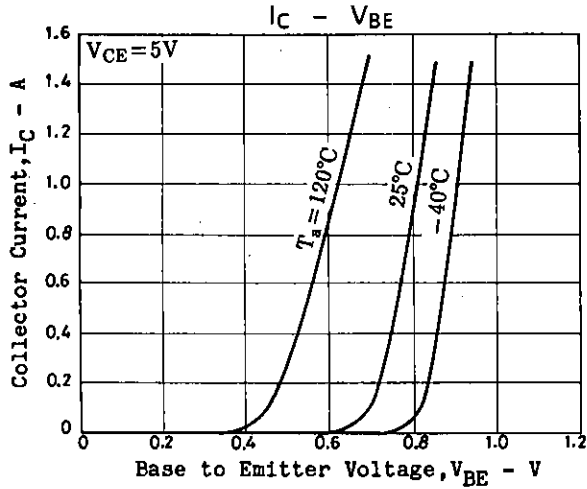


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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=0.75A, I_B=0.15A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=0.75A, I_B=0.15A$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	1100			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	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	μs
Storage Time	t_{stg}				3.0	μs
Fall Time	t_f				0.3	μs

Switching Time Test Circuit





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