

<b>SANYO</b>	No.2763	<b>2SC4224</b>
	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	$V_{CBO}$	1100	V
Collector to Emitter Voltage	$V_{CEO}$	800	V
Emitter to Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	3	A
Peak Collector Current	$i_{cp}$ $PW \leq 300\mu s, duty\ cycle \leq 10\%$	10	A
Base Current	$I_B$	1.5	A
Collector Dissipation	$P_C$ $T_a=25^\circ C$	1.65	W
		$T_c=25^\circ C$	50
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	$\mu A$
Emitter Cutoff Current	$I_{EBO}$ $V_{EB}=5V, I_C=0$				10	$\mu A$
DC Current Gain	$h_{FE(1)}$ $V_{CE}=5V, I_C=0.2A$		10*		40*	
		$h_{FE(2)}$ $V_{CE}=5V, I_C=1A$	8			
Gain-Bandwidth Product	$f_T$ $V_{CE}=10V, I_C=0.2A$			15		MHz
Output Capacitance	$c_{ob}$ $V_{CB}=10V, f=1MHz$			60		pF

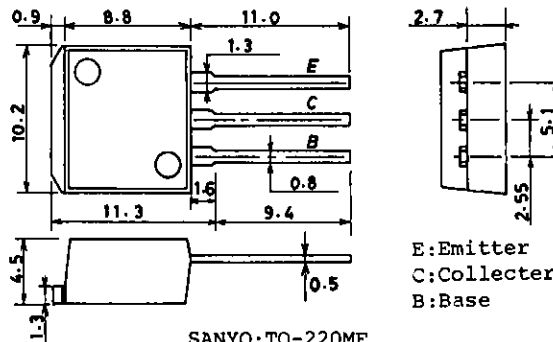
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\*: The  $h_{FE(1)}$  of the 2SC4224 is classified as follows. When specifying the  $h_{FE(1)}$  rank, specify two ranks or more in principle.

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

(unit: mm)



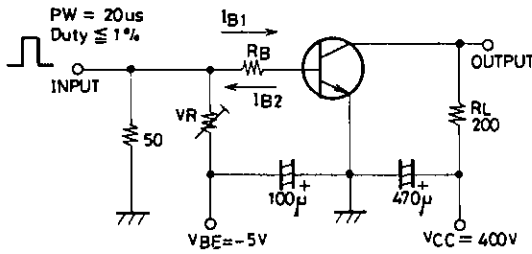
E: Emitter  
C: Collector  
B: Base

2SC4224

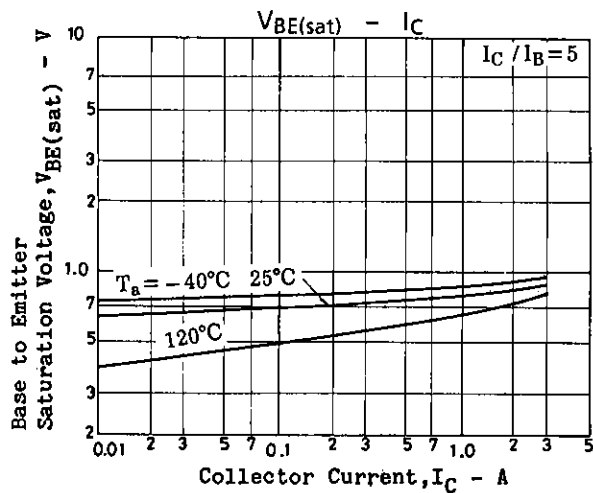
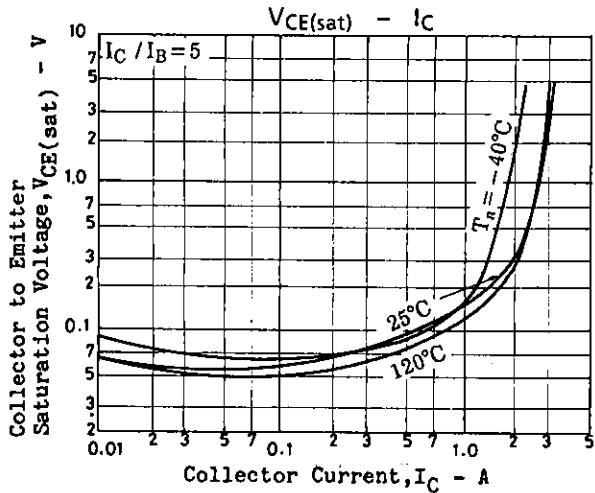
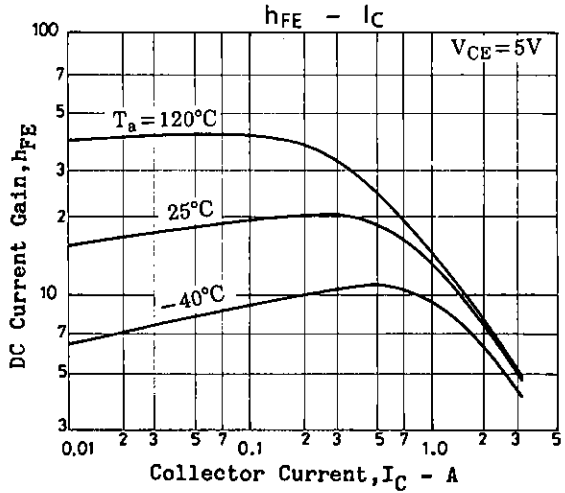
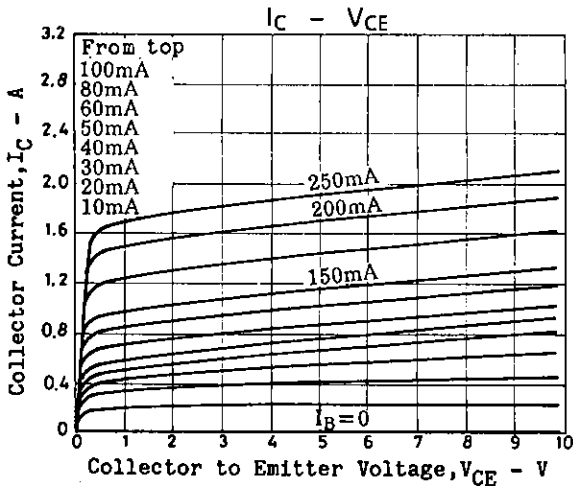
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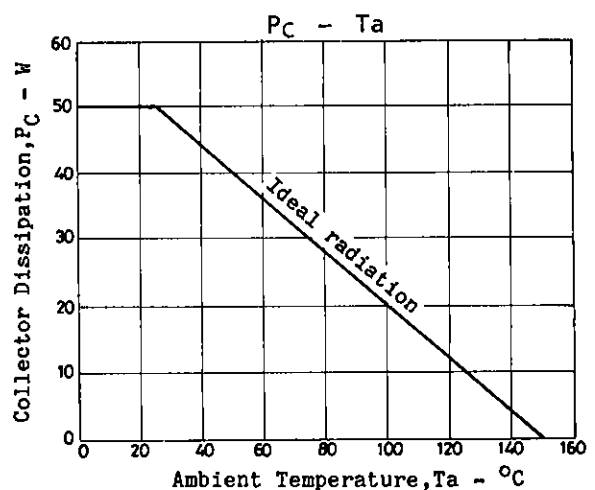
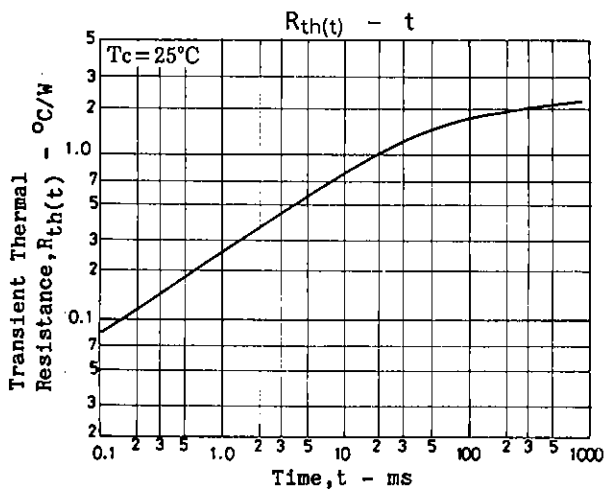
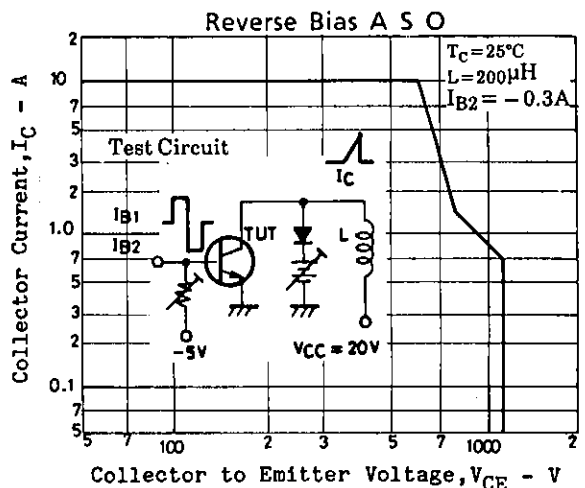
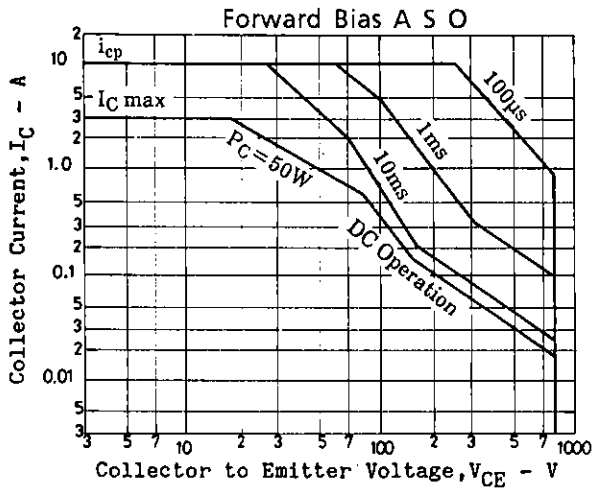
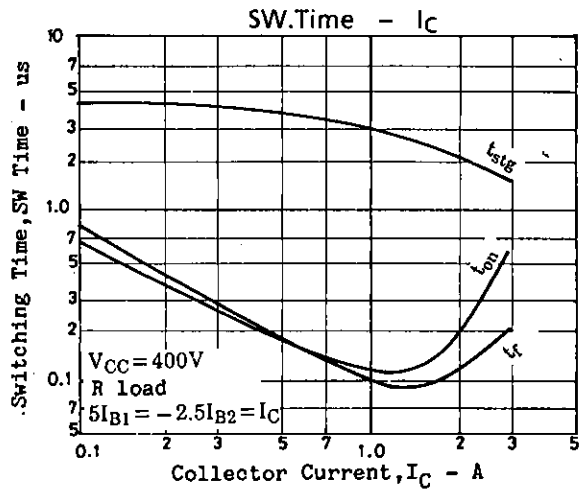
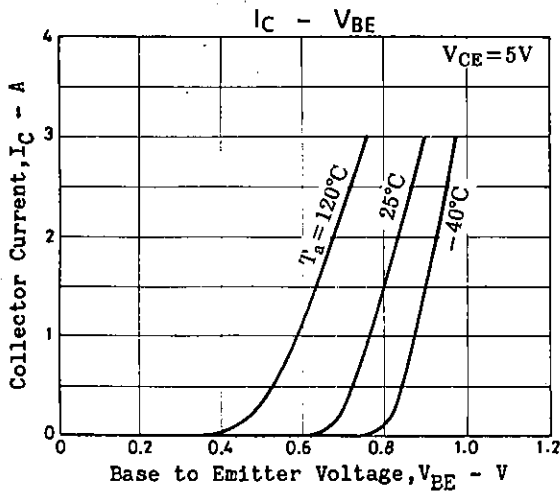
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5A, I_B=0.3A$			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5A, I_B=0.3A$			1.5	V
C-B Breakdown Voltage	$V^{(BR)}_{CBO}$	$I_C=1mA, I_E=0$	1100			V
C-E Breakdown Voltage	$V^{(BR)}_{CEO}$	$I_C=5mA, R_{BE}=\infty$	800			V
E-B Breakdown Voltage	$V^{(BR)}_{EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEX(sus)}$	$I_C=1.5A$	800			V
Rise Time	$t_{on}$	$I_C=2A, I_{B1}=0.4A,$ $I_{B2}=-0.8A, R_L=200ohms,$ $V_{CC}=400V$			0.5	$\mu s$
Storage Time	$t_{stg}$				3.0	$\mu s$
Fall Time	$t_f$				0.3	$\mu s$

Switching Time Test Circuit



Unit (resistance: Ω, capacitance: F)





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