

SANYO	No.1251A	2SC3183
NPN Triple Diffused Planar Silicon Transistor HIGH-SPEED SWITCHING APPLICATIONS		

Features

- . High breakdown voltage ($V_{CBO} \geq 900V$).
- . High switching speed.
- . Wide ASO.

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

			unit
Collector-to-Base Voltage	V_{CBO}	900	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	0.2	A
Peak Collector Current	i_{cp}	1	A
		PW \leq 300 μ s, Duty Cycle \leq 10%	
Collector Dissipation	P_C	25	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

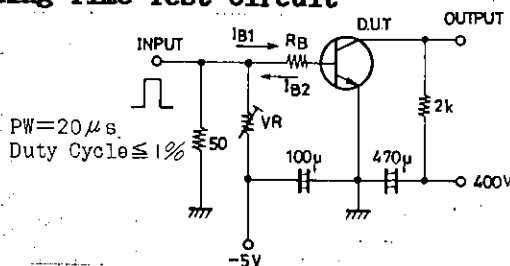
Electrical Characteristics at $T_a=25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{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	$h_{FE(1)}$	$V_{CE}=5V, I_C=20mA$	10*		40*	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=100mA$	8			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=20mA$			2.0	V
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=20mA$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		10		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	900			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEO(sus)}$	$I_C=0.2A, I_B=0.04A, L=10mH$	800			V
	$V_{CEX(sus)}$	$I_C=0.2A, I_{B1}=0.04A, I_{B2}=-0.04A, L=10mH, clamped$	900			V
Turn-on Time	t_{on}	$I_C=200mA, I_{B1}=40mA, I_{B2}=-80mA$			1.0	μs
Storage Time	t_{stg}	" "			3.0	μs
Fall Time	t_f	" "			1.0	μs

*: The $h_{FE(1)}$ of the 2SC3183 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more in principle.

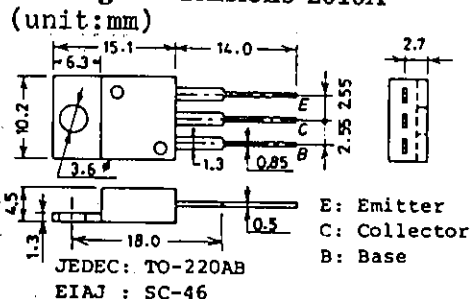
10	K	20	15	L	30	20	M	40
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Switching Time Test Circuit



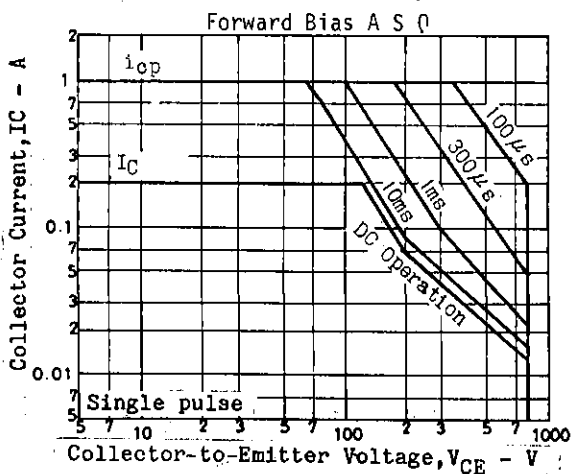
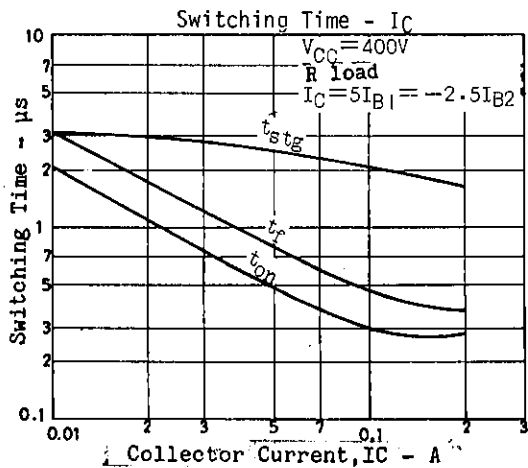
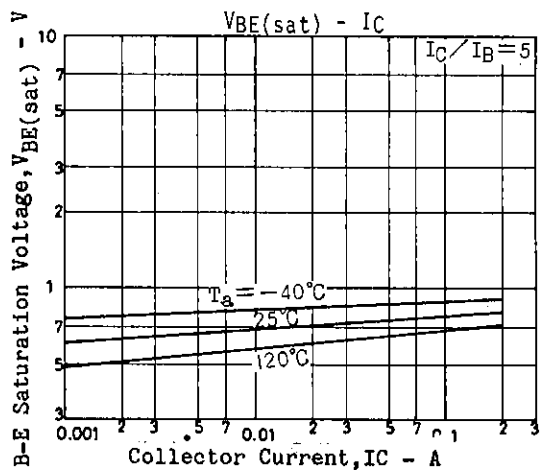
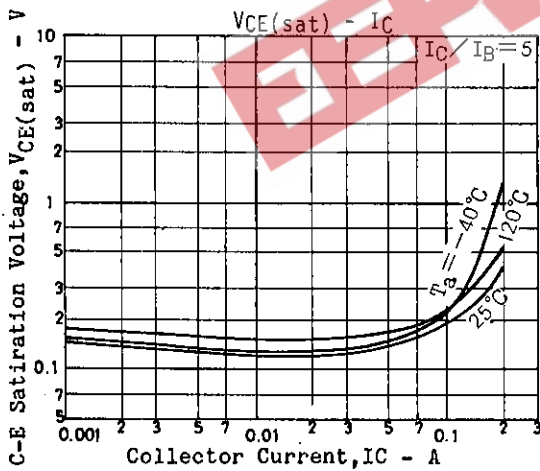
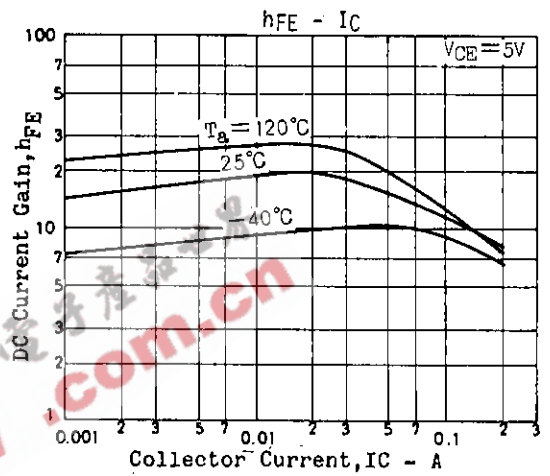
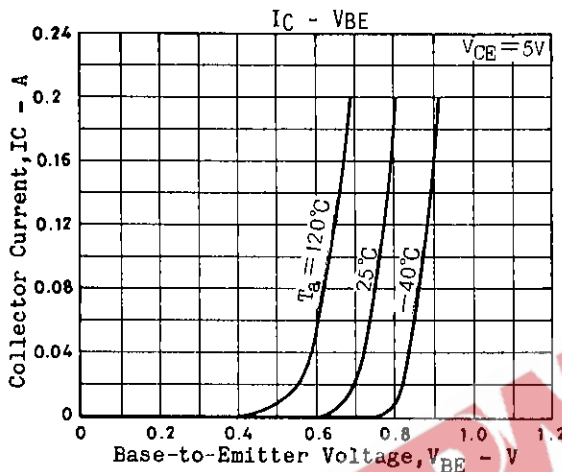
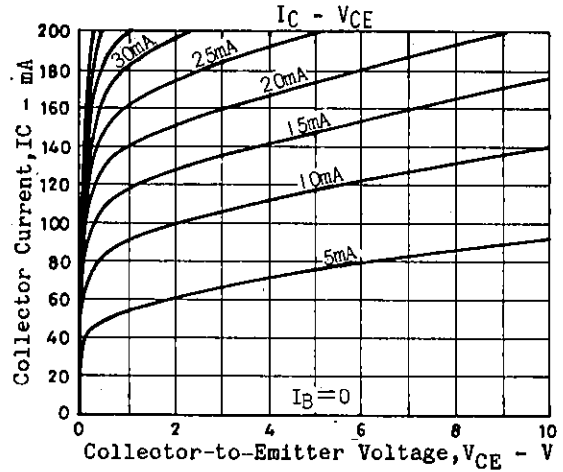
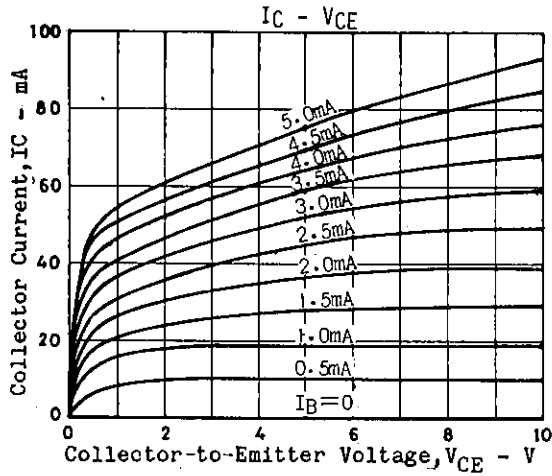
Unit (Resistance : Ω , Capacitance : F)

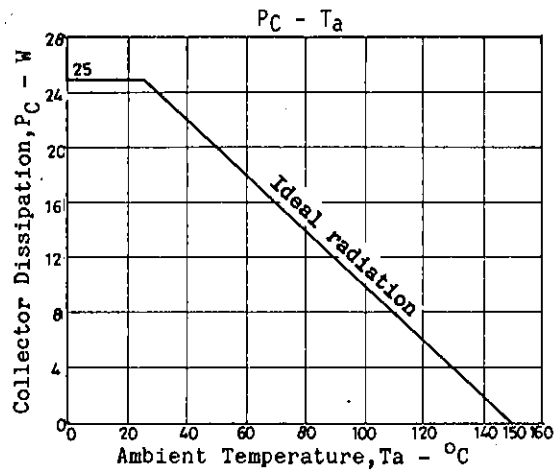
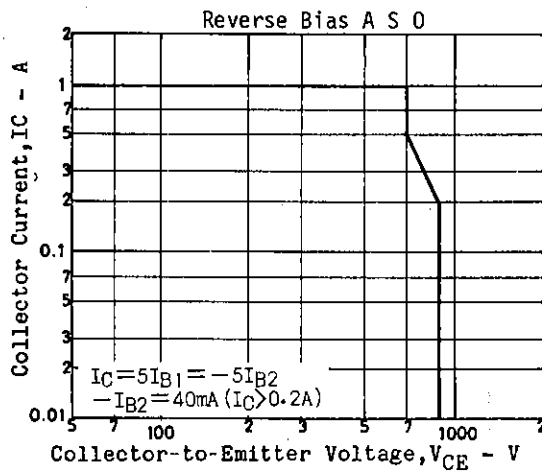
Package Dimensions 2010A



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