

<b>SANYO</b>	No.1685A	<h1 style="margin: 0;">2SA1423/2SC3656</h1> <p style="margin: 0;">PNP/NPN Epitaxial Planar Silicon Transistors</p> <h2 style="margin: 0;">Switching Applications</h2> <p style="margin: 0;">(with Bias Resistor)</p>
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**Use**

. Switching circuit, inverter circuit, interface circuit, driver circuit.

**Features**

. With bias resistor ( $R1=10k\Omega$  ,  $R2=10k\Omega$  ).

( ) : 2SA1423

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

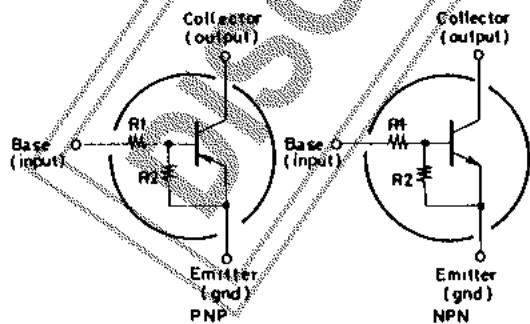
			unit
Collector to Base Voltage	$V_{CBO}$	(-)50	V
Collector to Emitter Voltage	$V_{CEO}$	(-)50	V
Emitter to Base Voltage	$V_{EBO}$	(-)10	V
Collector Current	$I_C$	(-)100	mA
Collector Current(Pulse)	$I_{CP}$	(-)200	mA
Collector Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

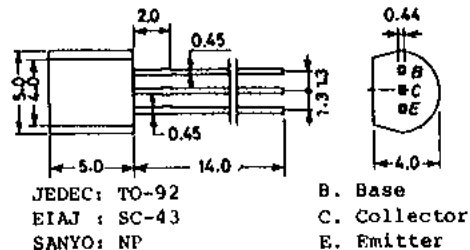
		min	typ	max	unit	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40V, I_E=0$		(-)0.1	$\mu A$	
Collector Cutoff Current	$I_{CEO}$	$V_{CE}=(-)40V, I_B=0$		(-)0.5	$\mu A$	
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)5V, I_C=0$	(-)170	(-)250	(-)330	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=(-)5V, I_C=(-)10mA$	50			
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)10V, I_C=(-)5mA$		250	MHz	
			(200)			
Output Capacitance	$c_{ob}$	$V_{CB}=(-)10V, f=1MHz$		3.7	pF	
				(5.5)		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)10mA, I_B=(-)0.5mA$	(-)0.1	(-)0.3	V	
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)50		V	
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-)50		V	

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**Electrical Connection**



**Case Outline 2003A**  
(unit:mm)



Specifications and information herein are subject to change without notice.

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			min	typ	max	unit
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=(-)5V, I_C=(-)100\mu A$	(-)0.8	(-)1.1	(-)1.5	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2V, I_C=(-)10mA$	(-)1.0	(-)2.0	(-)4.0	V
Input Resistance	$R_1$		7.0	10	13	k $\Omega$
Resistance Ratio	$R_1/R_2$		0.9	1.0	1.1	-

Sample Application Circuit

