



# RA101C/RC101C

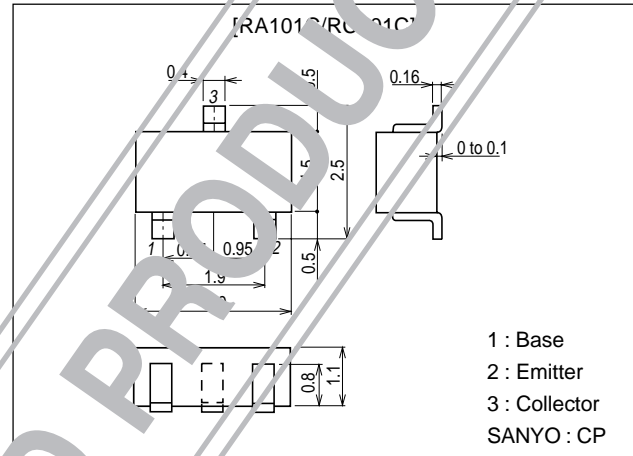
## Switching Applications (with Bias Resistances)

### Features

- On-chip bias resistances ( $R_1=47k\Omega$ ,  $R_2=47k\Omega$ ).
- Compact package (CP).

### Package Dimensions

unit:mm  
2018B



( ) : RA101C

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-)50	V
Collector-to-Emitter Voltage	$V_{CE0}$		(-)50	V
Emitter-to-Base Voltage	$V_{EB0}$		(-)10	V
Input Voltage	$V_{IN}$		(-)40	V
Collector Current	$I_C$		(-)100	mA
Collector Current (Pulse)	$I_{CP}$		(-)200	mA
Collector Dissipation	$P_C$		200	mW
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40\text{V}$ , $I_E=0$			(-)0.1	$\mu\text{A}$
	$I_{CEO}$	$V_{CE}=(-)40\text{V}$ , $I_B=0$			(-)0.5	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)5\text{V}$ , $I_C=0$	(-)30	(-)53	(-)80	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=(-)5\text{V}$ , $I_C=(-)5\text{mA}$	50			
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)10\text{V}$ , $I_C=(-)5\text{mA}$		250		MHz
				(200)		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=(-)10\text{V}$ , $f=1\text{MHz}$		3.5		pF
				(5.3)		pF

Marking : RA101C : 01A, RC101C : 01C

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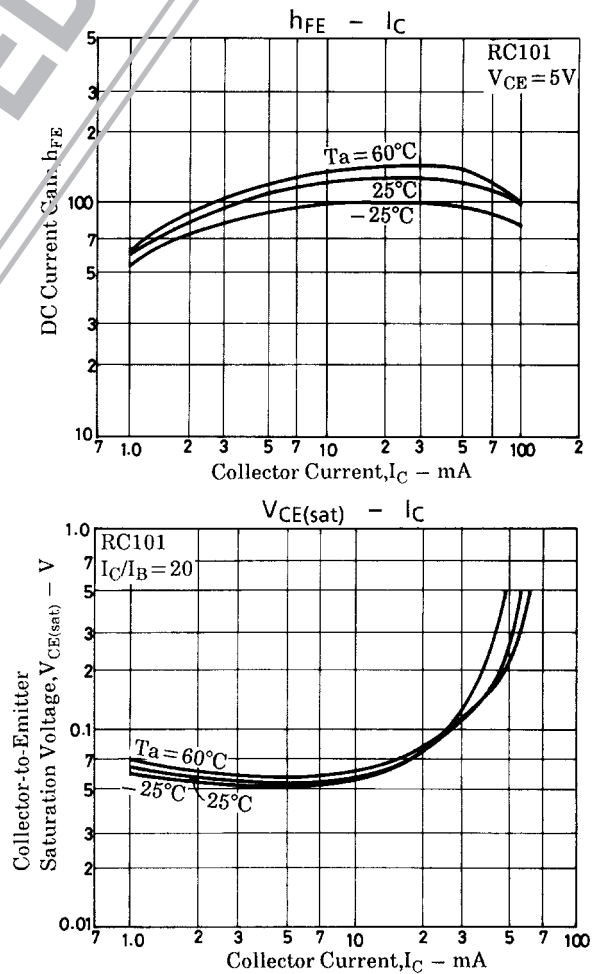
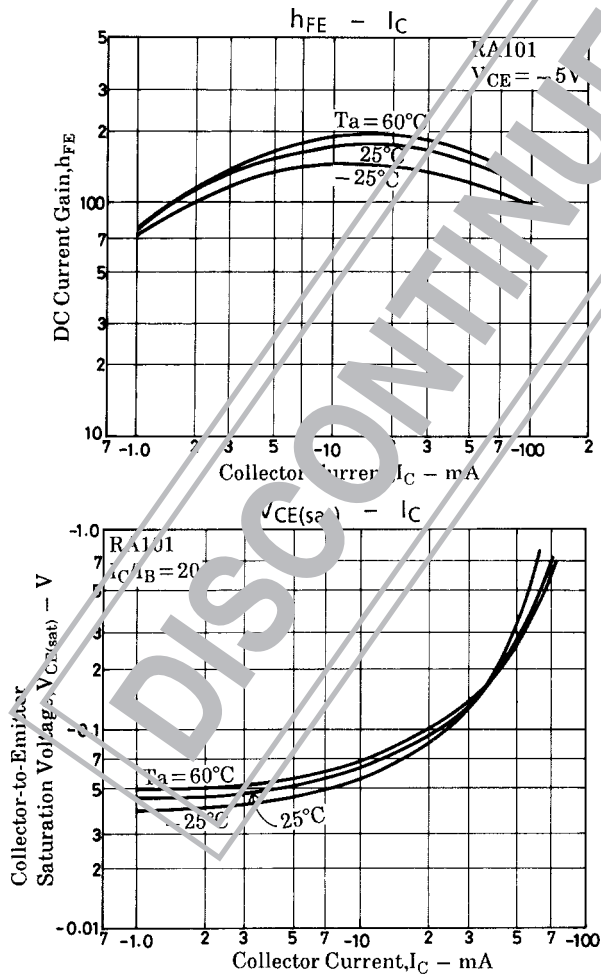
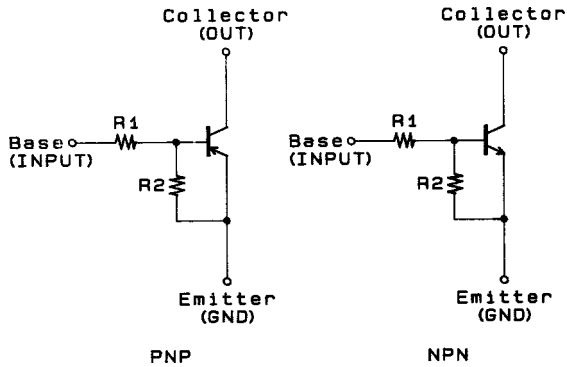
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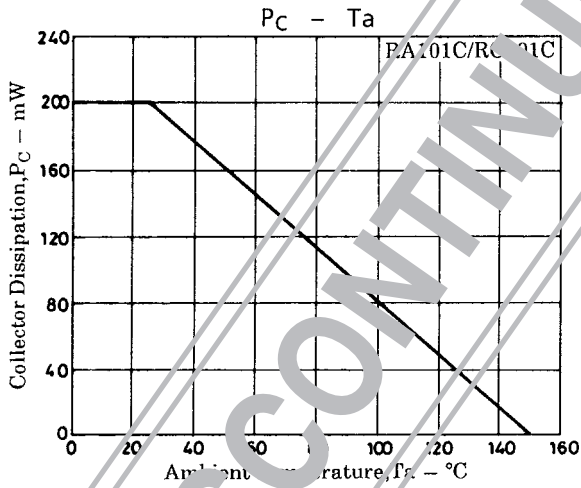
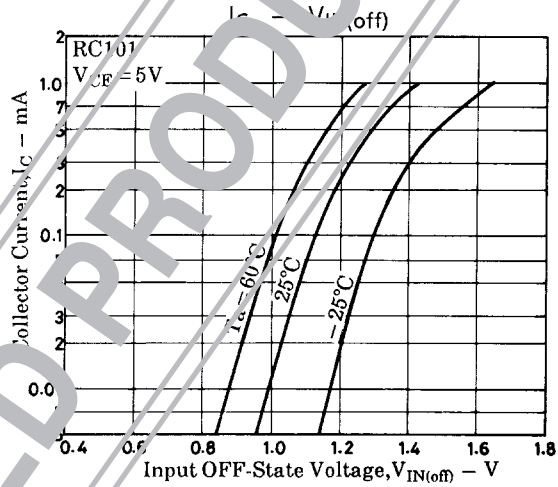
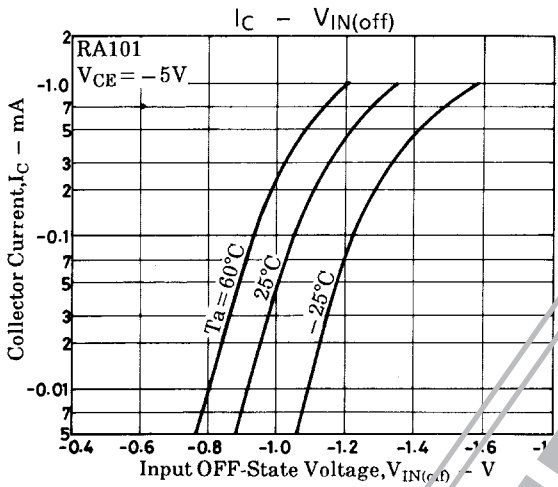
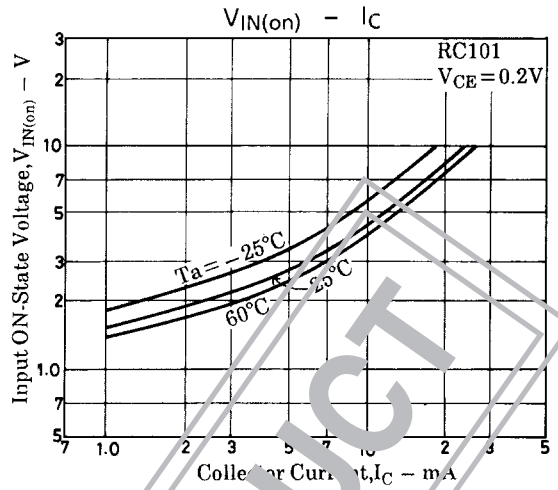
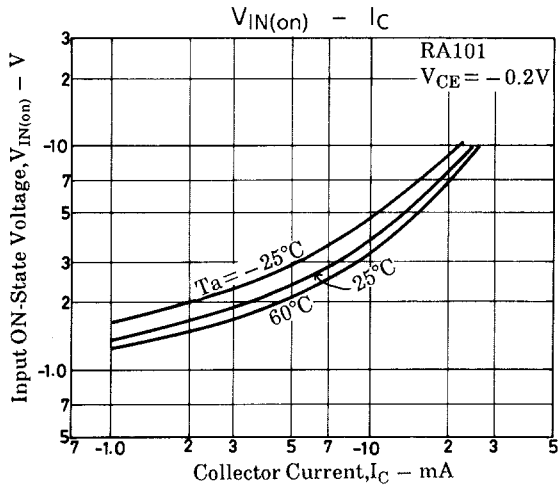
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)5mA, I_B=(-)0.25mA$		(-)0.1	(-)0.3	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-)50			V
Input OFF-State Voltage	$V_{IN(off)}$	$V_{CE}=(-)5V, I_C=(-)100\mu A$	(-)0.8	(-)1.1	(-)1.5	V
Input ON-State Voltage	$V_{IN(on)}$	$V_{CE}=(-)0.2V, I_C=(-)5mA$	(-)1.0	(-)2.5	(-)5.0	V
Input Resistance	R1		32	47	62	k $\Omega$
Resistance Ratio	R1/R2			1.0		

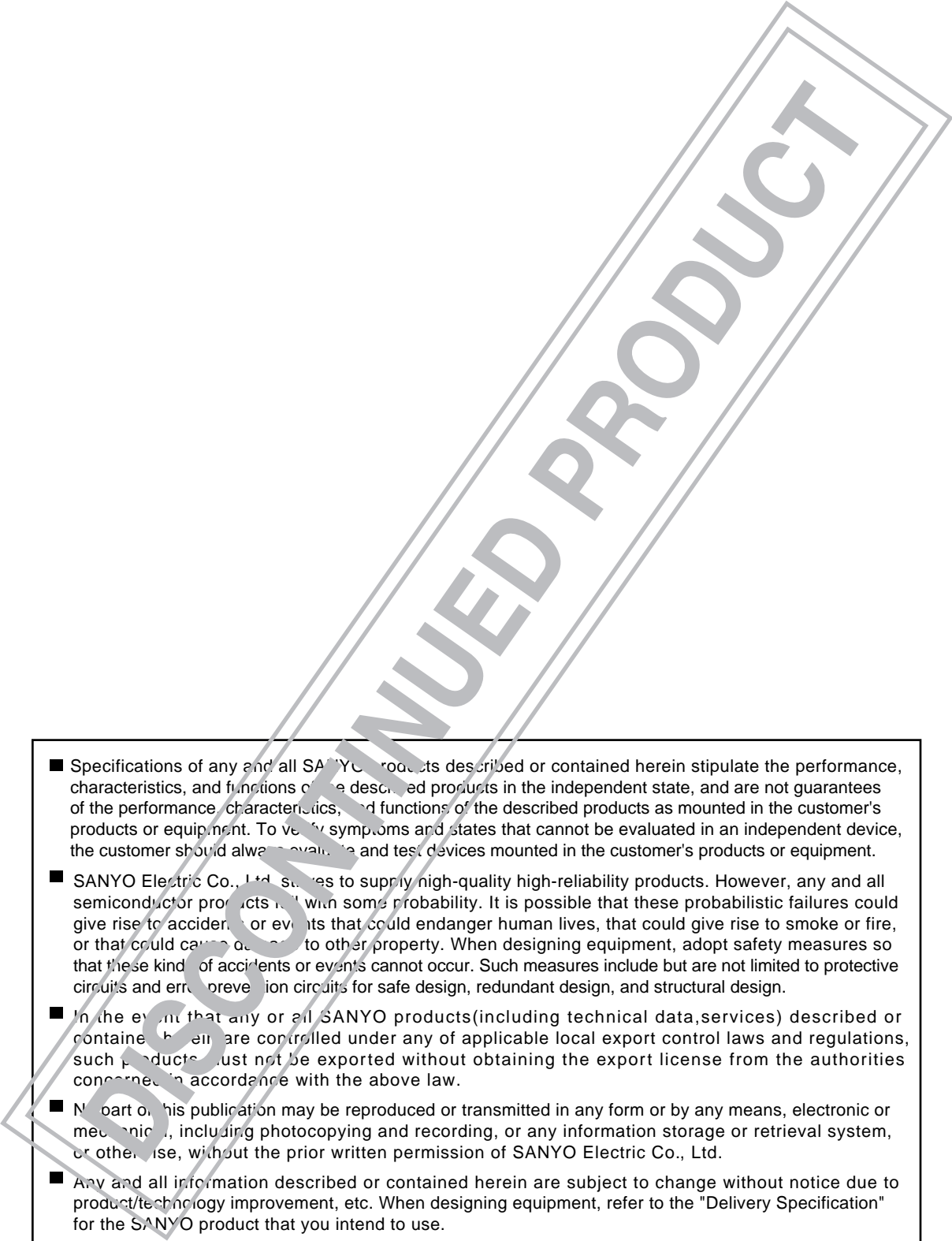
## Electrical Connection



RA101C/RC101C



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