

Ordering number:EN4764

PNP/NPN Epitaxial Planar Silicon Transistors



RA104C/RC104C

Switching Applications (with Bias Resistances)

Applications

- Switching circuits, inverter circuits, interface circuits, driver circuits.

Features

- On-chip bias resistances (R1=10kΩ, R2=47kΩ).
- Compact package (CP).

() : RA104C

Specifications

Absolute Maximum Ratings at Ta = 25°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}		(-)6	V
Input Voltage	V _{IN}		(-)30	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	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(-)0.1	μA
	I _{CEO}	V _{CE} =(-)40V, I _B =0			(-)0.5	μA
Emitter Cutoff Current	I _{EB0}	V _{EB} =(-)5V, I _C =0	(-)67	(-)88	(-)125	μA
DC Current Gain	h _{FE}	V _{CE} =(-)5V, I _C =(-)5mA	70			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)5mA		250		MHz
				(200)		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		3.5		pF
				(5.3)		pF

Marking : RA104C : 04A, RC104C : 04C

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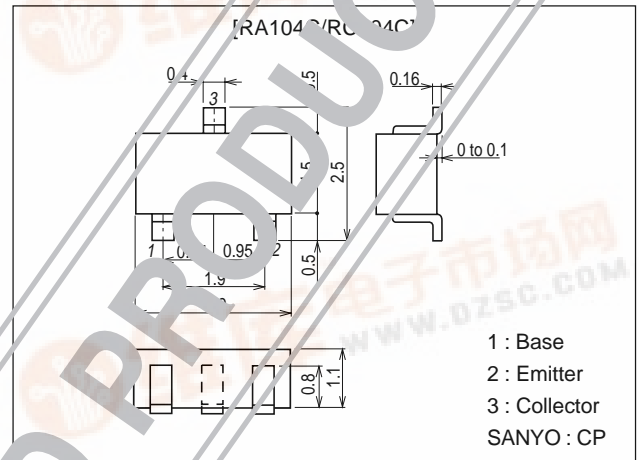
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Package Dimensions

unit:mm

2018B

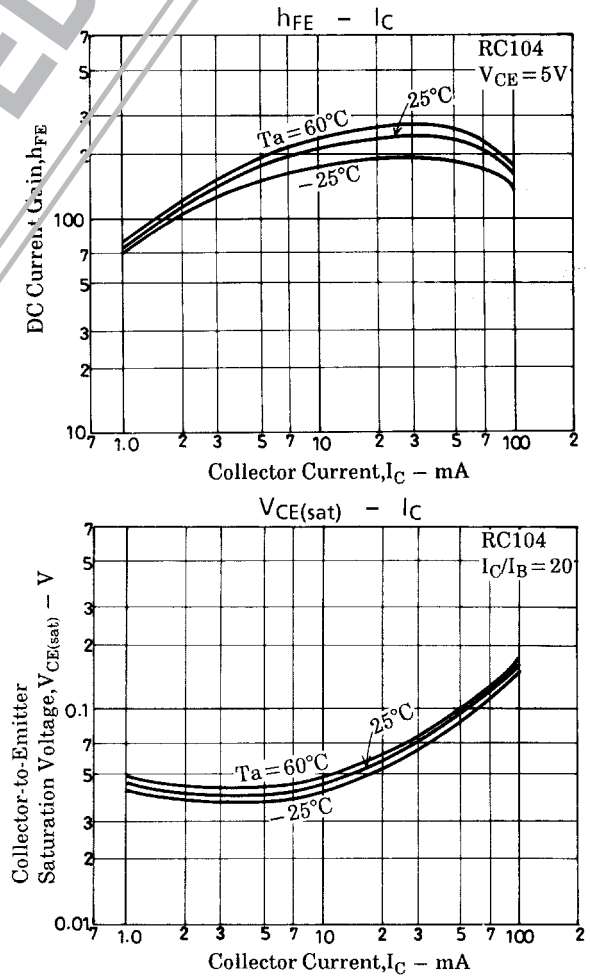
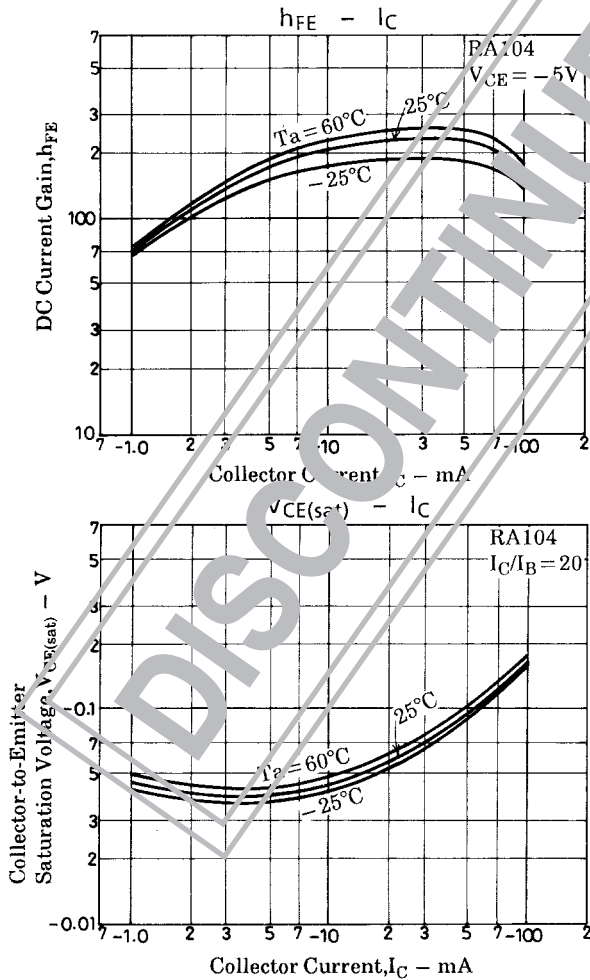
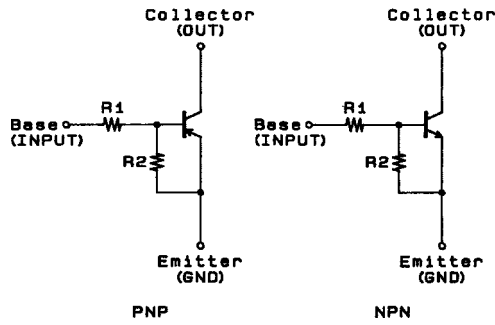


RA104C/RC104C

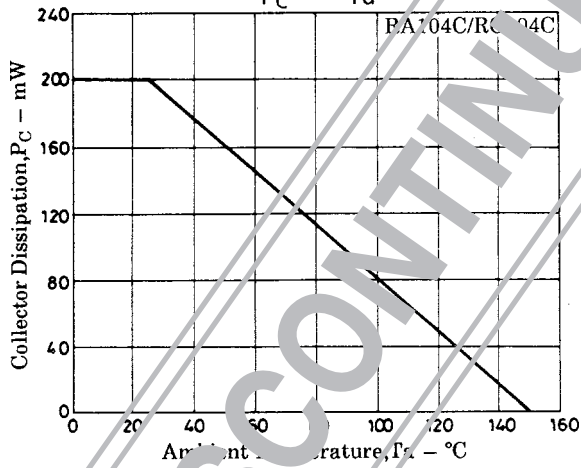
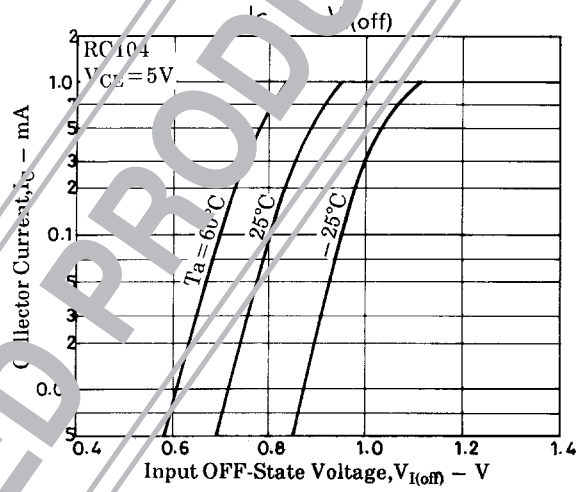
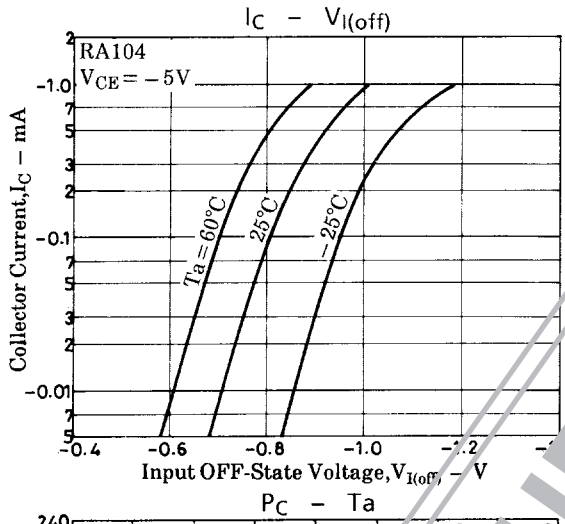
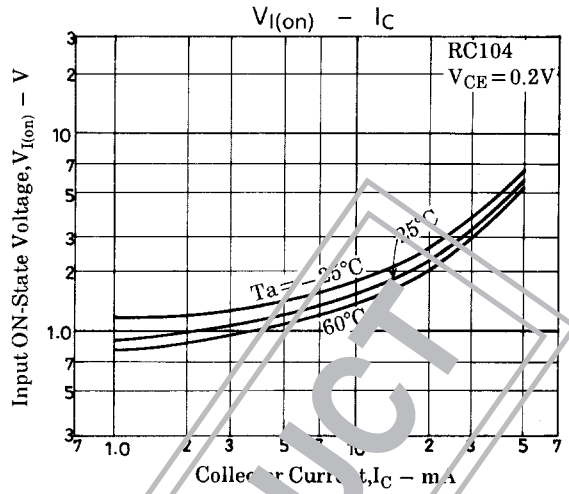
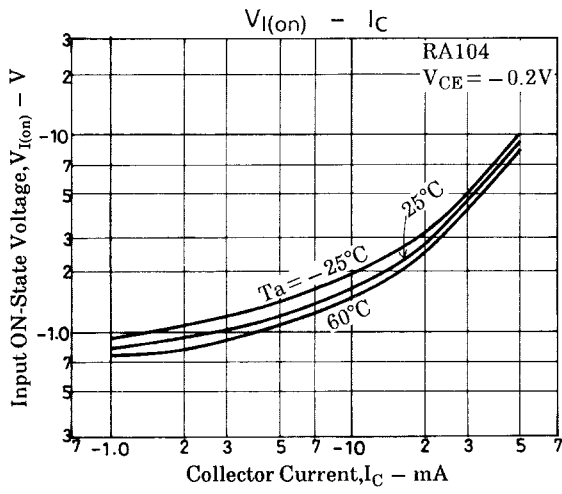
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)10\text{mA}, I_B=(-)0.5\text{mA}$		(-)0.1	(-)0.3	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}, I_E=0$	(-)50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu\text{A}, R_{BE}=\infty$	(-)50			V
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=(-)5\text{V}, I_C=(-)100\mu\text{A}$	(-)0.6	(-)0.8	(-)1.0	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2\text{V}, I_C=(-)5\text{mA}$	(-)0.7	(-)1.0	(-)2.0	V
Input Resistance	R1		7	10	13	k Ω
Resistance Ratio	R1/R2			0.213		

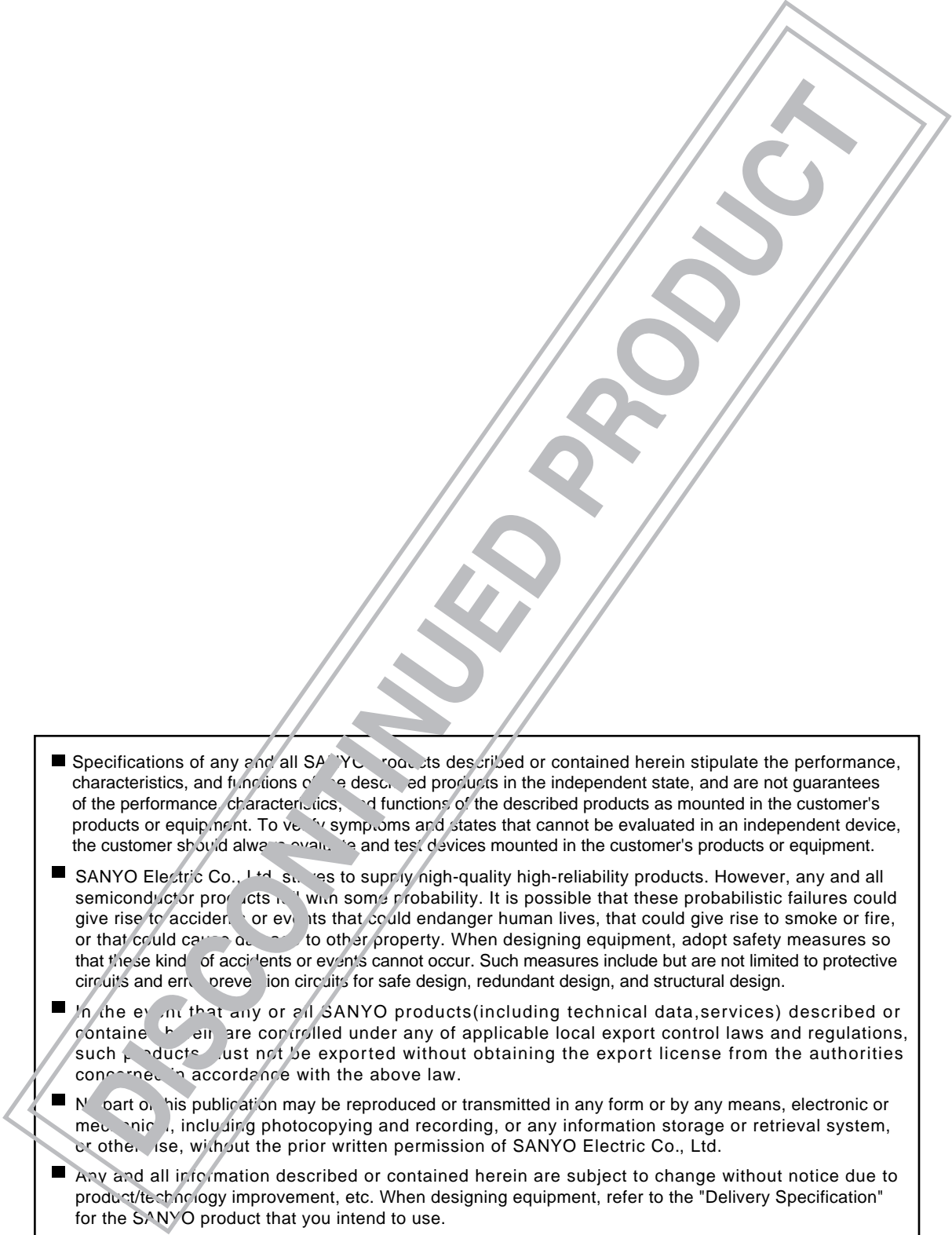
Electrical Connection



RA104C/RC104C



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