

2SA1522/2SC3916**Switching Applications (with Bias Resistance)****Applications**

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

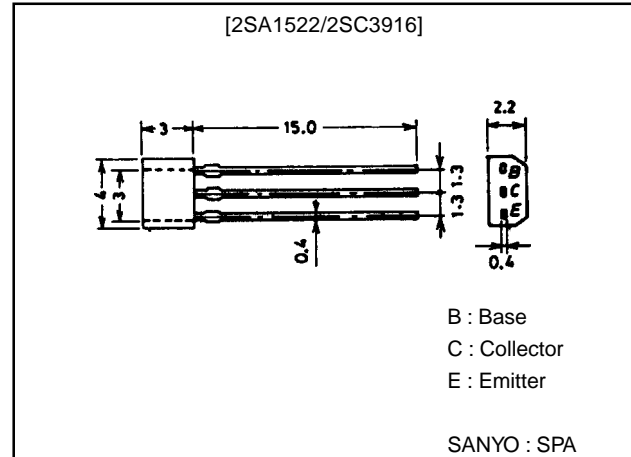
Features

- On-chip bias resistance : R1=10k Ω , R2=10k Ω .
- Small-sized package : SPA.
- Large current capacity : I_C=500mA.

Package Dimensions

unit:mm

2033



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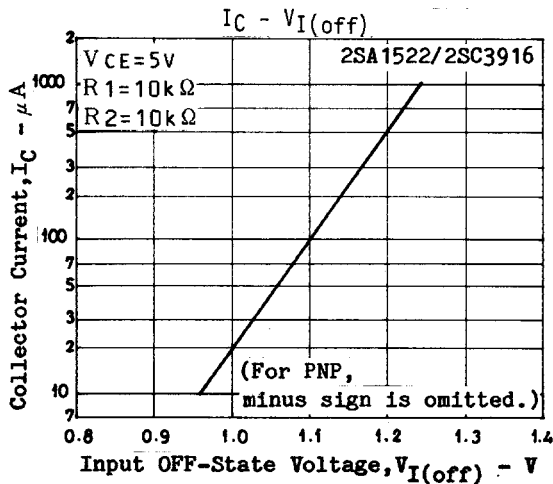
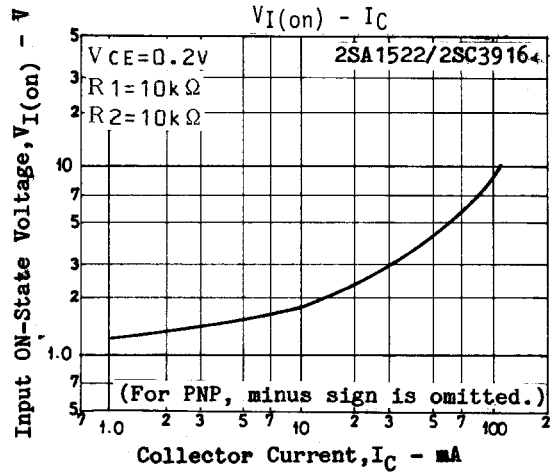
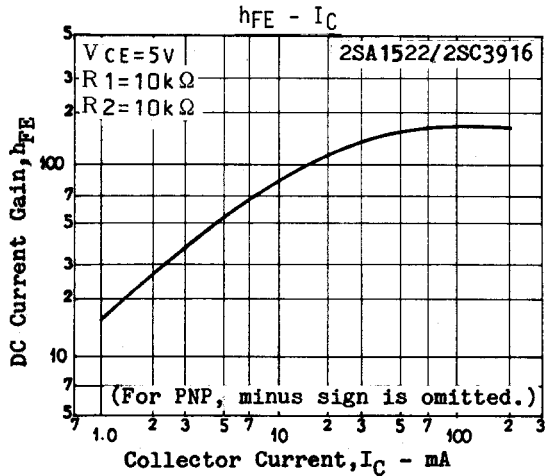
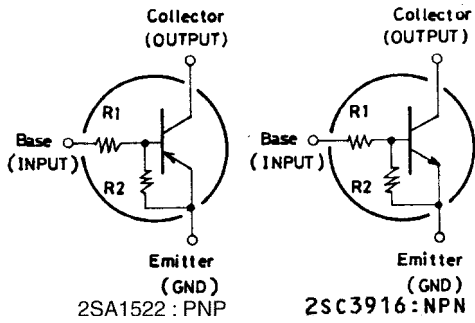
Specifications**Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		(-)50	V
Collector-to-Emitter Voltage	V _{CEO}		(-)50	V
Emitter-to-Base Voltage	V _{EBO}		(-)10	V
Collector Current	I _C		(-)500	mA
Collector Current (Pulse)	I _{CP}		(-)800	mA
Collector Dissipation	P _C		300	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 _{CB0}	V _{CB} =(-)40V, I _E =0			(-)0.1	μ A
	I _{CEO}	V _{CE} =(-)40V, I _B =0			(-)0.5	μ A
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)5V, I _C =0	(-)195	(-)250	(-)360	μ 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)		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		3.7		pF
				(5.5)		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)20mA, I _B =(-)1mA		(-)0.1	(-)0.3	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)10 μ A, I _E =0	(-)50			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)100 μ A, R _{BE} = ∞	(-)50			V
Input OFF-State Voltage	V _{I(off)}	V _{CE} =(-)5V, I _C =(-)100 μ 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	R1		7	10	13	k Ω
Resistance Ratio	R1/R2		0.9	1.0	1.1	

Electrical Connection



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