

2SA1518/2SC3912**Switching Applications (With Bias Resistance)****Application**

- Switching circuits, inverters circuits, interface circuits, driver circuits.

Features

- On-chip bias resistance : $R1=10k\Omega$, $R2=10k\Omega$.
- Small-sized package : CP.
- Large current capacity : $I_C=500mA$.

() : 2SA1518

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

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
Peak Collector Current	I_{CP}		(-800)	mA
Collector Dissipation	P_C		200	mW
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

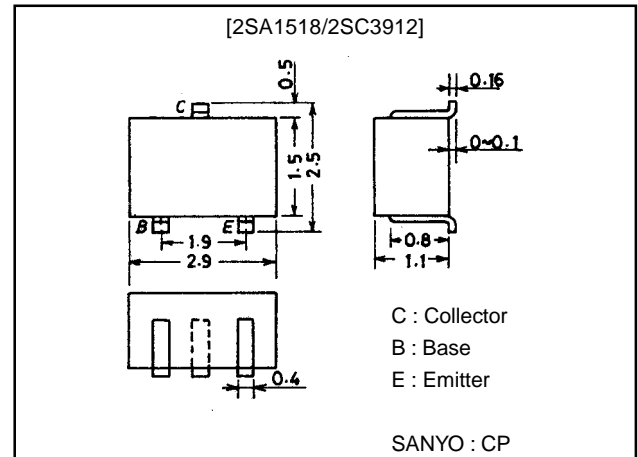
Electrical Characteristics at $T_a = 25^\circ C$

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_{EBO}	$V_{EB}=-5V, I_C=0$	(-195)	(-250)	(-360)	μA
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	$V_{(BR)CBO}$	$I_C=(-10\mu A, I_E=0$	(-50)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-100\mu A, R_{BE}=\infty$	(-50)			V
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=-5V, I_C=(-100\mu A)$	(-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	R1		7	10	13	k Ω
Resistance Ratio	R1/R2		0.9	1.0	1.1	

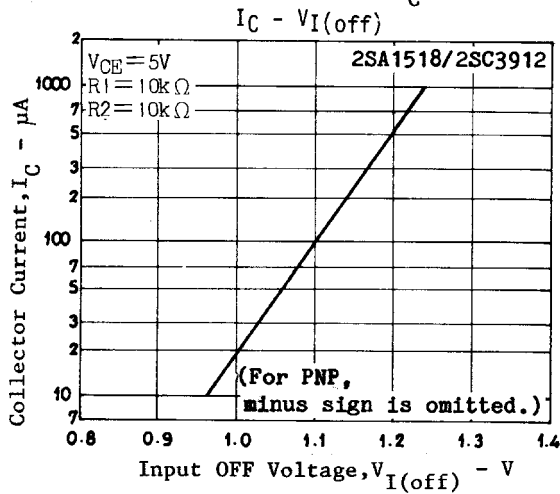
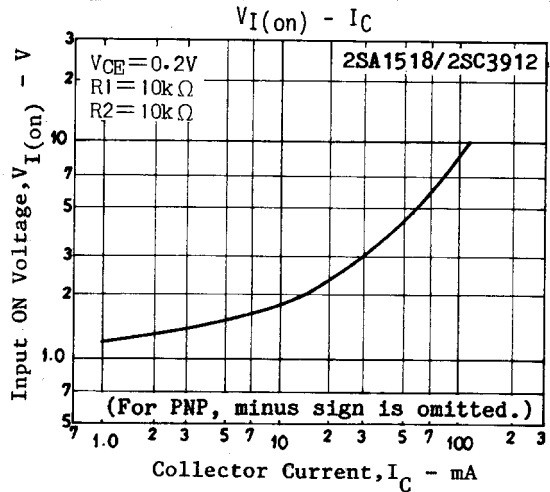
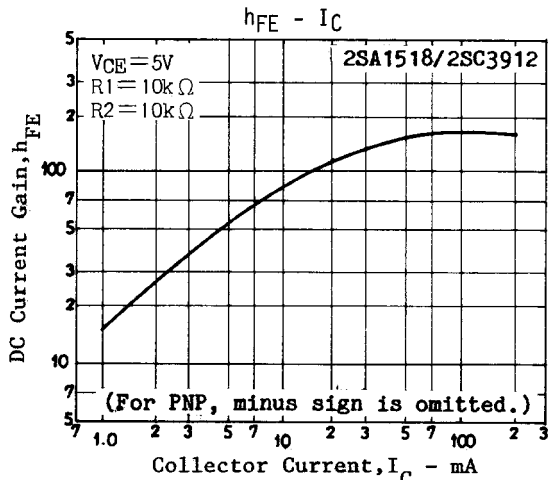
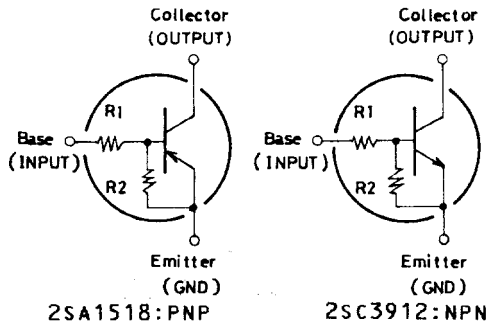
Package Dimensions

unit:mm

2018A



Electrical Connection



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