

SANYO	No.2159A	2SA1518/2SC3912
		PNP/NPN Epitaxial Planar Silicon Transistors Switching Applications (with Bias Resistance)

Applications

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

Features

- On-chip bias resistance: (R1=10kΩ, R2=10kΩ)
- Small-sized package: CP
- Large current capacity: I_C=500mA

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Absolute Maximum Ratings at Ta=25°C

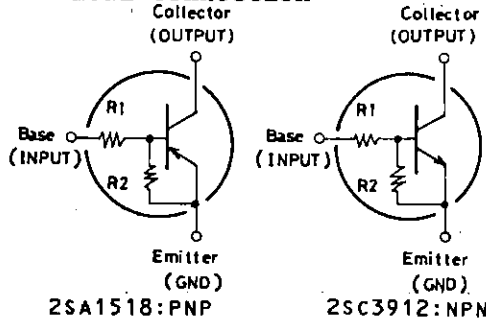
			unit
Collector to Base Voltage	V _{CB0}	(-)50	V
Collector to Emitter Voltage	V _{CEO}	(-)50	V
Emitter to Base Voltage	V _{EBO}	(-)10	V
Collector Current	I _C	(-)500	mA
Collector Current(Pulse)	I _{CP}	(-)800	mA
Collector Dissipation	P _C	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

		min	typ	max	unit	
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
	h _{FE}	V _{CE} =(-)5V, I _C =(-)10mA	50			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)5mA		250		MHz
	c _{ob}	V _{CB} =(-)10V, f=1MHz		(200)		MHz
Output Capacitance				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
	V _{(BR)CBO}	I _B =(-)10μA, I _E =0	(-)50			V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)100μA, R _{BE} =∞	(-)50			V

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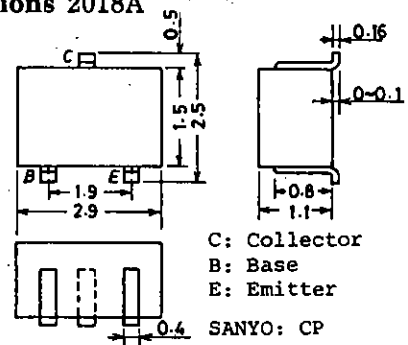
Electrical Connection



Package Dimensions 2018A

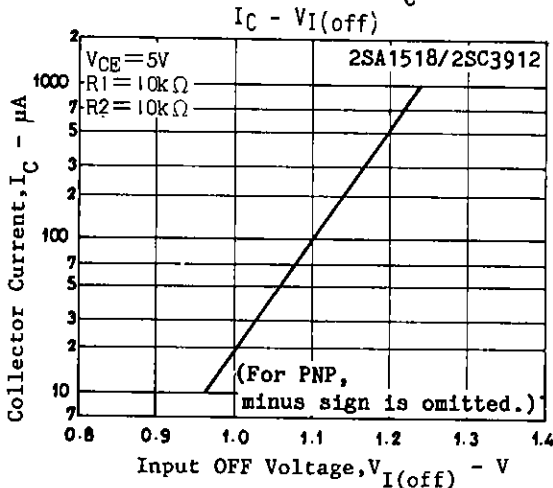
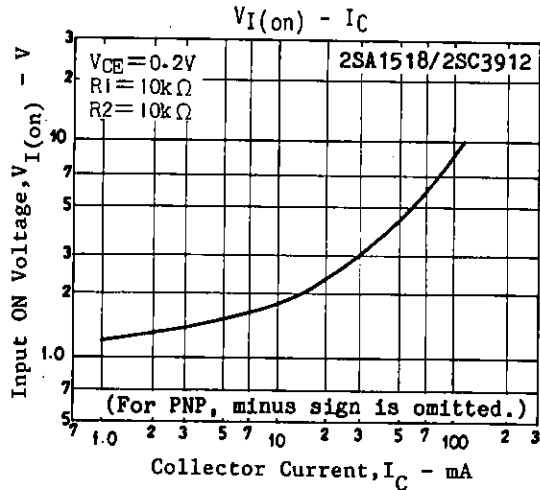
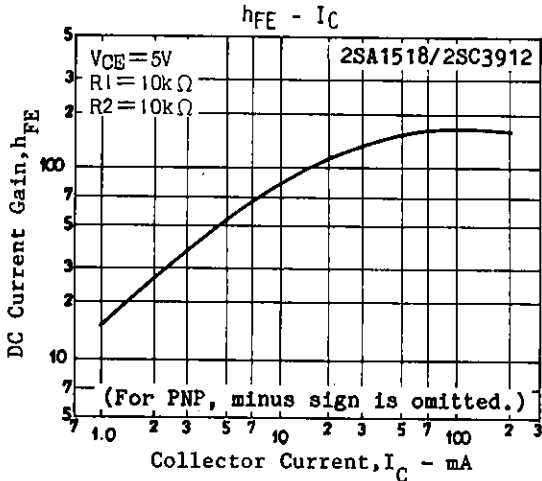
(unit: mm)

Marking
2SA1518: LL
2SC3912: TY



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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	10	13	$k\Omega$
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	



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