

**2SA1510,
2SC3900**

2018A

PNP/NPN Epitaxial Planar
Silicon TransistorsT-37-13
T-35-11**Switching Applications**
(with Bias Resistance $R1=4.7k\Omega$)

©2104A

Applications

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

Features

- On-chip bias resistance: $R1=4.7k\Omega$
- Small-sized package: CP

(): 2SA1510

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

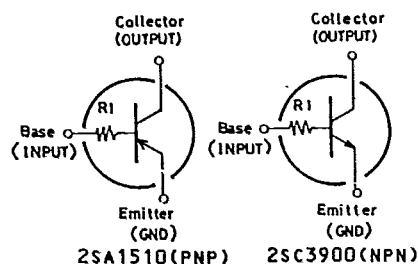
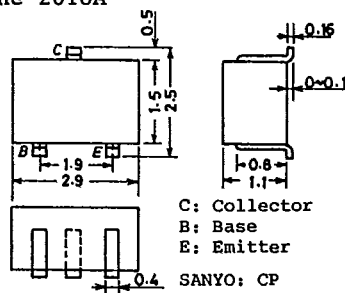
			unit
Collector to Base Voltage	V_{CBO}	(-)50	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)100	mA
Peak Collector Current	i_C	(-)200	mA
Collector Dissipation	P_{CP}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5\text{V}, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)5\text{V}, I_C=(-)10\text{mA}$	100			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10\text{V}, I_C=(-)5\text{mA}$		250 (200)		MHz
Output Capacitance	c_{ob}	$V_{CB}=(-)10\text{V}, f=1\text{MHz}$		3.7 (5.5)		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)10\text{mA}, I_E=(-)0.5\text{mA}$		(-)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

Continued on next page.

Marking: 2SA1510: KL, 2SC3900: SY

Electrical Connection**Case Outline 2018A**
(unit:mm)

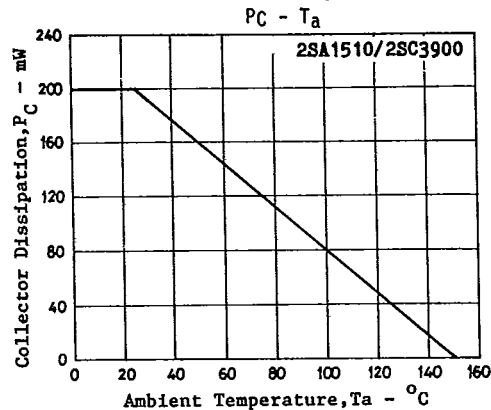
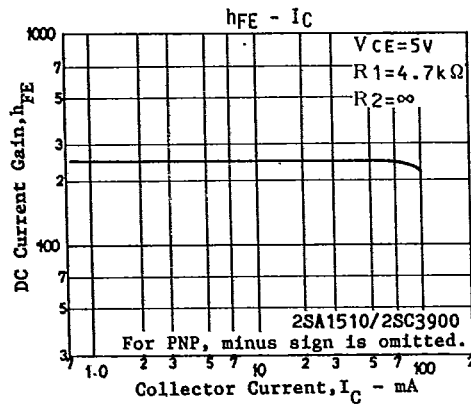
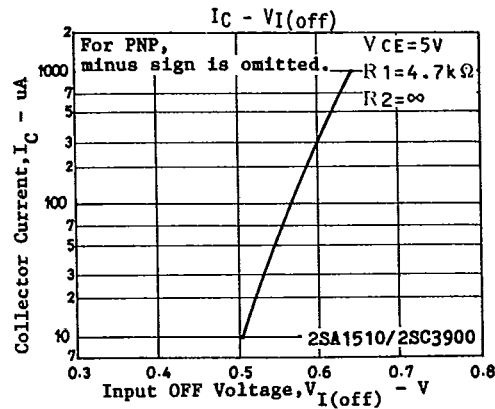
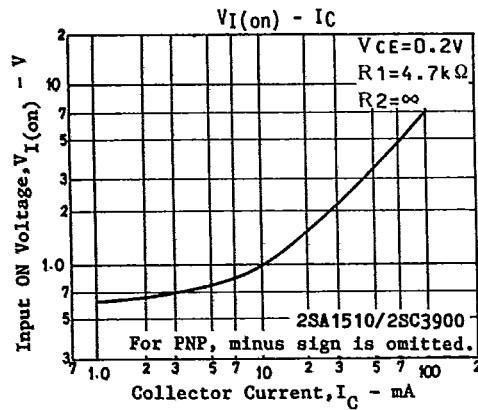
2SA1510/2SC3900

T-37-13

Continued from preceding page.

T-35-11

			min	typ	max	unit
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=(-)5V,$ $I_C=(-)100\mu A$	$(-)0.4$	$(-)0.55$	$(-)0.8$	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2V,$ $I_C=(-)10mA$	$(-)0.6$	$(-)1.0$	$(-)2.0$	V
Input Resistance	R_I		3.3	4.7	6.1	kohm

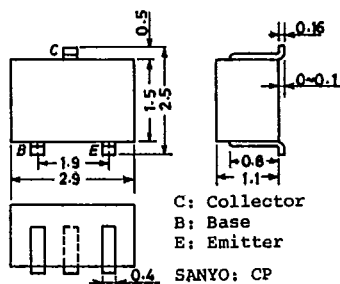


T-91-20

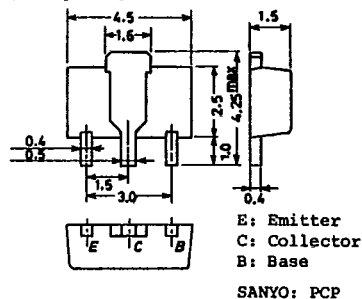
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- All of Sanyo surface mount transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

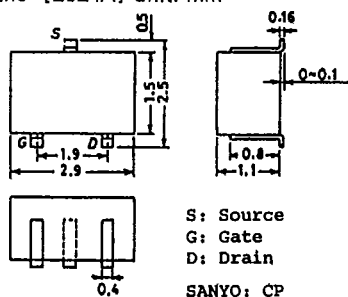
Case Outline—[2018A] unit: mm



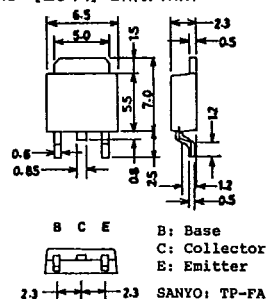
Case Outline—[2038] unit: mm



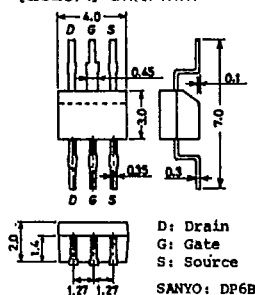
Case Outline—[2024A] unit: mm



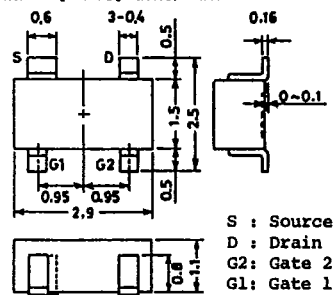
Case Outline—[2044] unit: mm



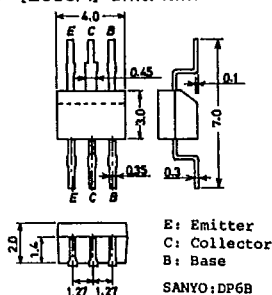
Case Outline—[2028A] unit: mm



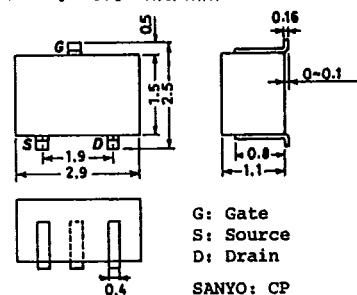
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

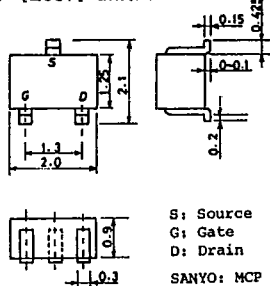


Case Outline—[2050] unit: mm

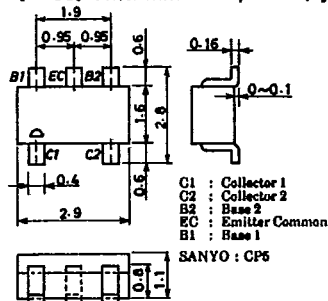


T-91-20

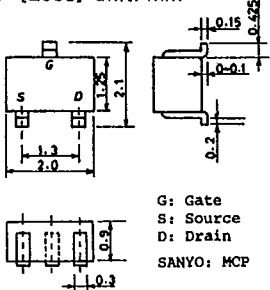
Case Outline—[2057] unit: mm



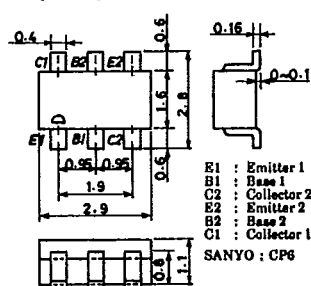
Case Outline—[2066] unit: mm



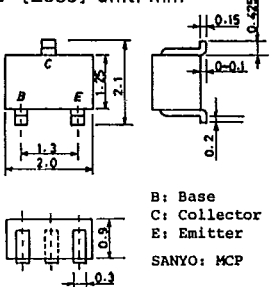
Case Outline—[2058] unit: mm



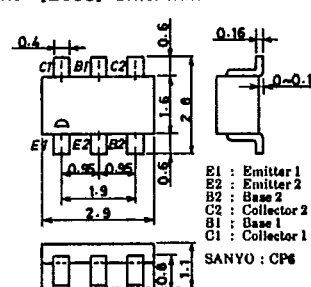
Case Outline—[2067] unit: mm



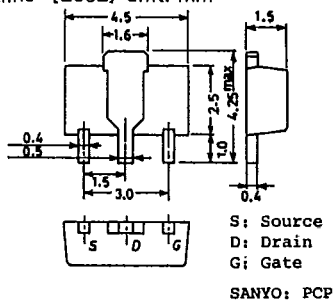
Case Outline—[2059] unit: mm



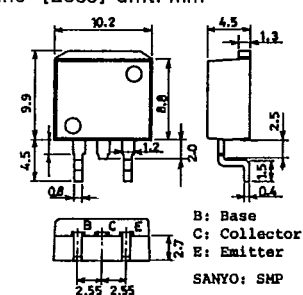
Case Outline—[2068] unit: mm



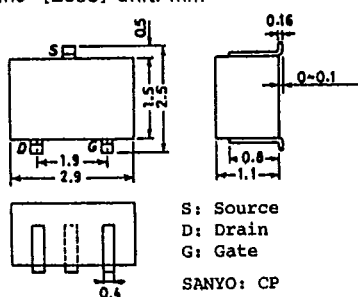
Case Outline—[2062] unit: mm



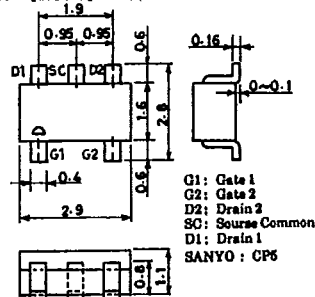
Case Outline—[2069] unit: mm



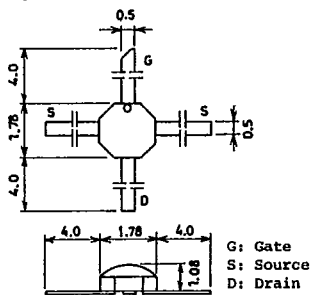
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

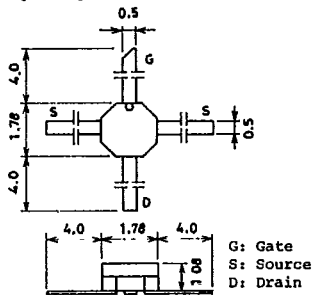


Case Outline-[2071] unit: mm



T-9120

Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

