

**2SA1510,
2SC3900**



2018A

T-37-13
T-35-11
PNP/NPN Epitaxial Planar
Silicon Transistors

Switching Applications
(with Bias Resistance R1=4.7kΩ)

©2104A

Applications

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

Features

- On-chip bias resistance: R1=4.7kohms
- Small-sized package: CP

():2SA1510

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CB0}	(-)50	V
Collector to Emitter Voltage	V_{CE0}	(-)50	V
Emitter to Base Voltage	V_{EB0}	(-)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	°C
Storage Temperature	T_{stg}	-55 to +150	°C

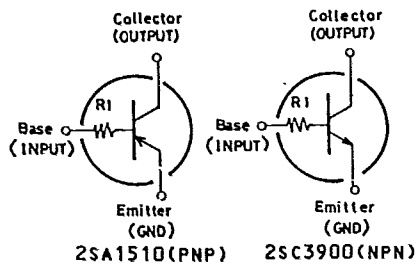
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	uA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)5V, I_C = 0$			(-)0.1	uA
DC Current Gain	h_{FE}	$V_{CE} = (-)5V, I_C = (-)10mA$	100			
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	$V_{CE(sat)}$	$I_C = (-)10mA, I_B = (-)0.5mA$		(-)0.1	(-)0.3	V
Collector to Base Breakdown Voltage	$V_{(BR)CB0}$	$I_C = (-)10uA, I_E = 0$	(-)50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C = (-)100uA, R_{BE} = \infty$	(-)50			V

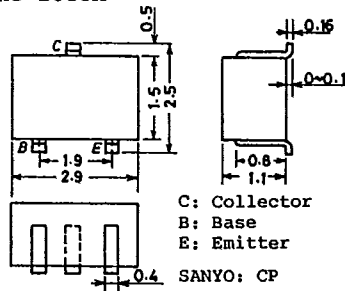
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Marking: 2SA1510: KL, 2SC3900: SY

Electrical Connection



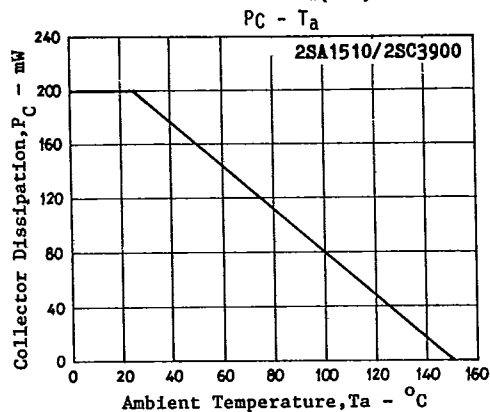
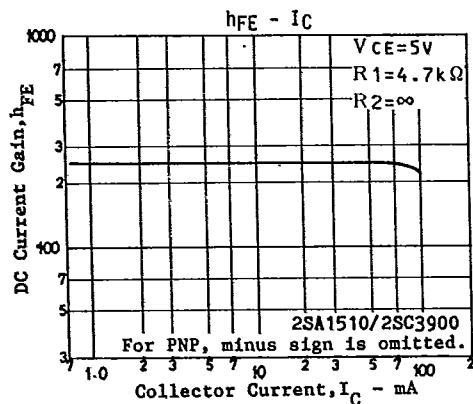
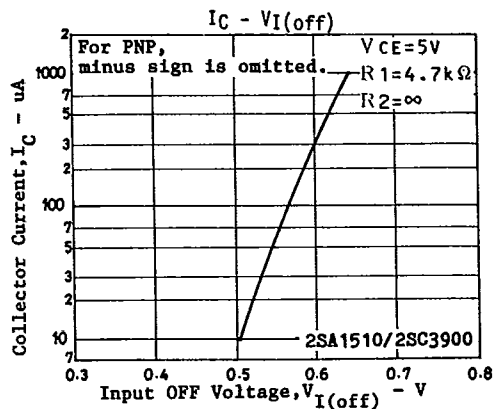
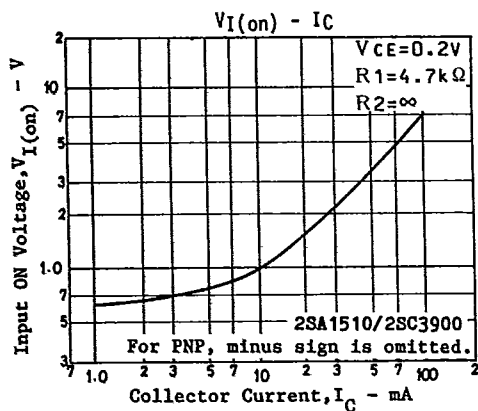
Case Outline 2018A
(unit:mm)



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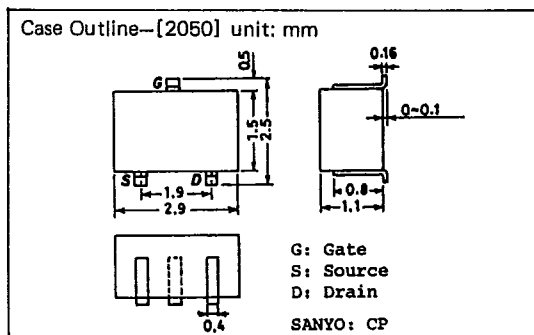
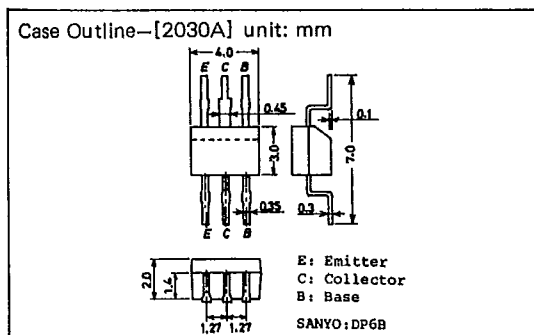
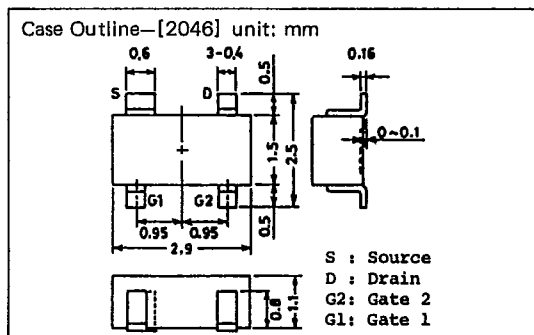
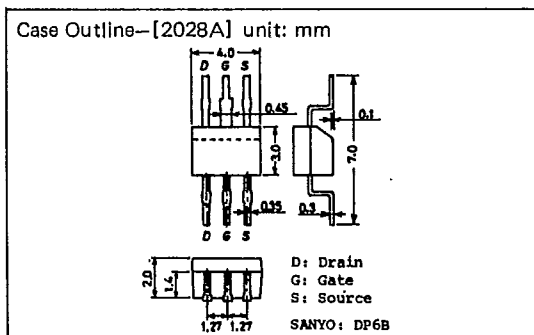
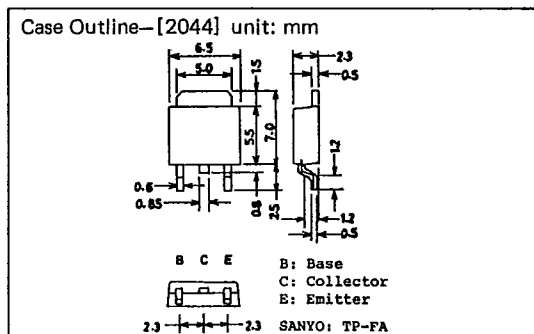
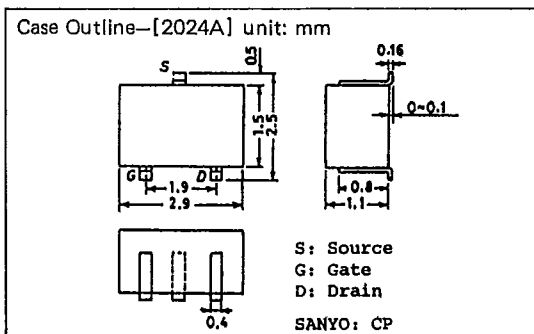
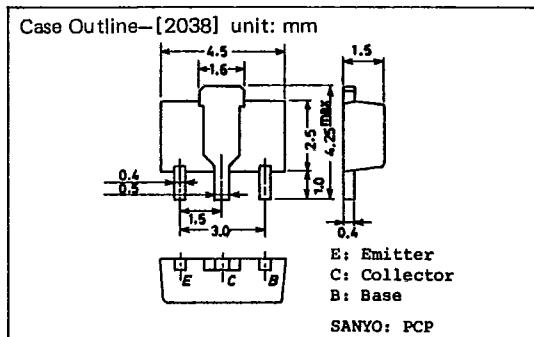
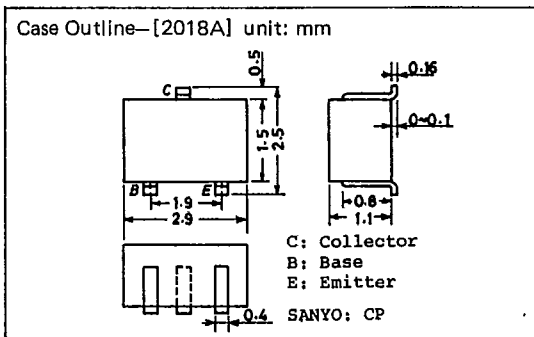
T-35-11

			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

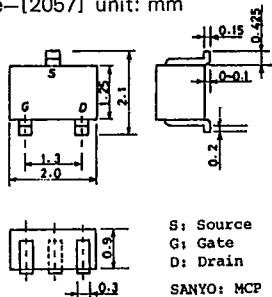


CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

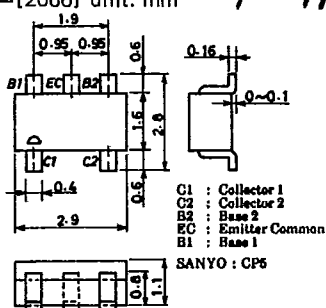
- All of Sanyo surface mount transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.



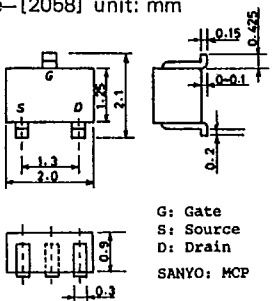
Case Outline—[2057] unit: mm



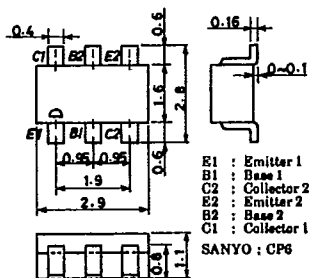
Case Outline—[2066] unit: mm



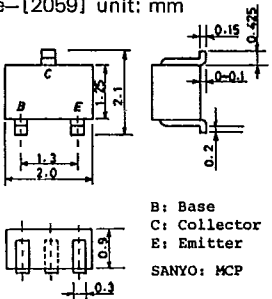
Case Outline—[2058] unit: mm



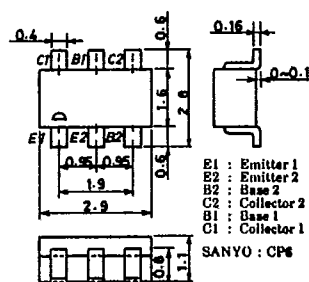
Case Outline—[2067] unit: mm



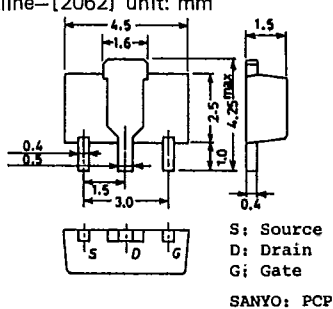
Case Outline—[2059] unit: mm



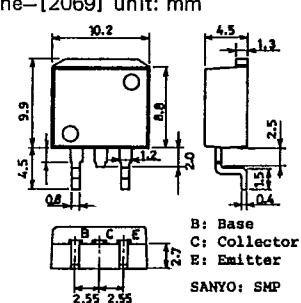
Case Outline—[2068] unit: mm



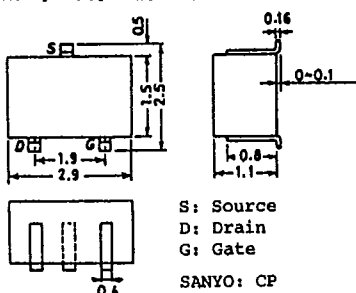
Case Outline—[2062] unit: mm



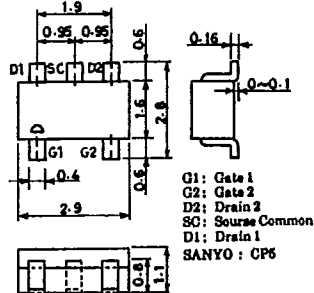
Case Outline—[2069] unit: mm



Case Outline—[2065] unit: mm

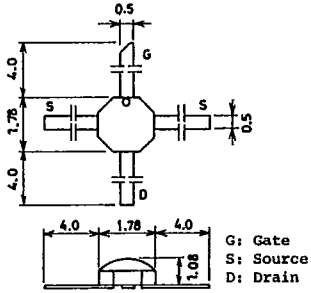


Case Outline—[2070] unit: mm

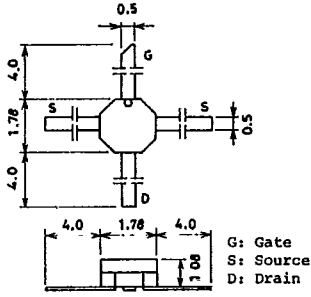


T-9120

Case Outline-[2071] unit: mm



Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

