

**2SA1496,
2SC3859**

2018A

PNP/NPN Epitaxial Planar
Silicon Transistors

T-37-13

T-35-11

Switching Applications
(with Bias Resistance $R_1=10k\Omega$)

©2106A

Applications

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

Features

- On-chip bias resistance: $R_1=10k\Omega$
- Small-sized package: CP

(): 2SA1496

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

			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_{cp}	(-)200	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

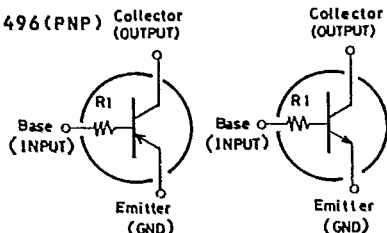
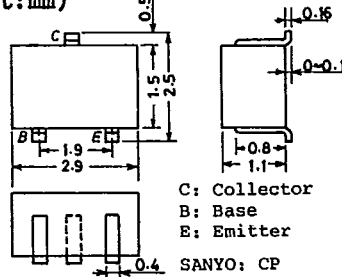
			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)40\text{V}, I_E=0$		(-)0.1		μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=(-)5\text{V}, I_C=0$		(-)0.1		μA
DC Current Gain	h_{FE}	$V_{CE}=(-)5\text{V}, I_C=(-)10\text{mA}$	100			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10\text{V}, I_C=(-)5\text{mA}$		250		MHz
				(200)		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10\text{V}, f=1\text{MHz}$		3.5		pF
				(5.3)		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	$V_{(BR)CB0}$	$I_C=(-)10\mu\text{A}, I_E=0$	(-)50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C=(-)100\mu\text{A}, R_{BE}=\infty$	(-)50			V
Input OFF Voltage	$V_{I(off)}$	$V_{CE}=(-)5\text{V}, I_C=100\mu\text{A}$	(-)0.4	(-)0.55	(-)0.8	V
Input ON Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2\text{V}, I_C=(-)10\text{mA}$	(-)0.7	(-)1.2	(-)3.0	V
Input Resistance	R_1		7.0	10	13	kohm

Marking: 2SA1496: GL, 2SC3859: PY

Electrical Connection

2SC3859(NPN)

2SA1496(PNP)

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

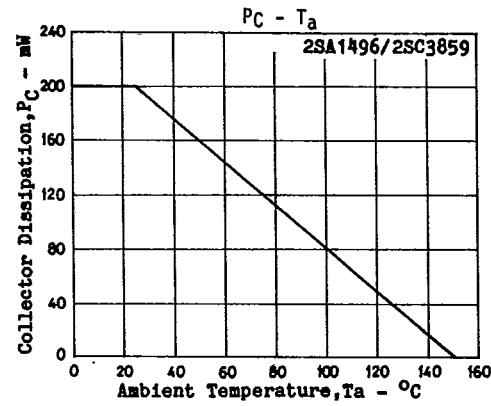
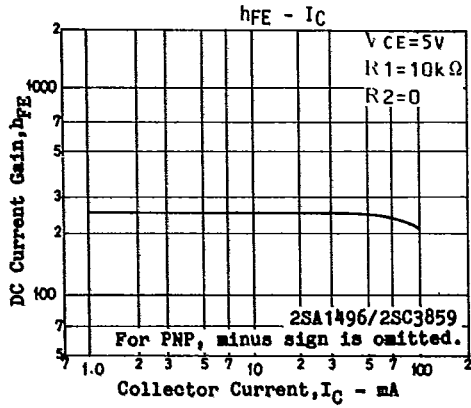
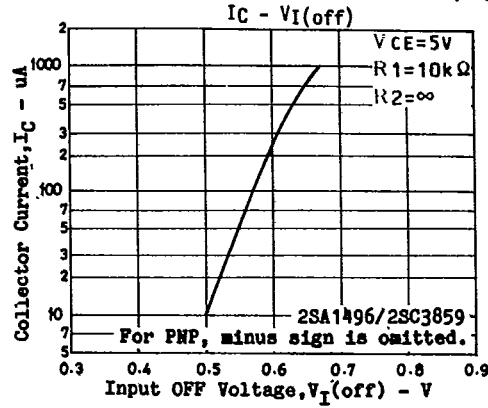
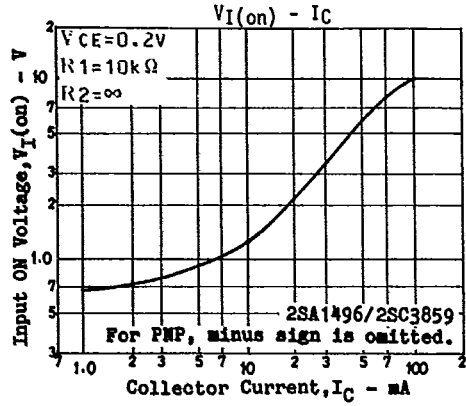
SANYO: CP

3317KI/6256AT, TS No.2106-1/2

2SA1496/2SC3859

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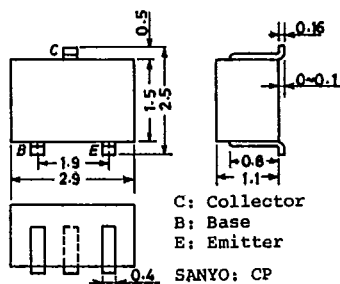


T-91-20

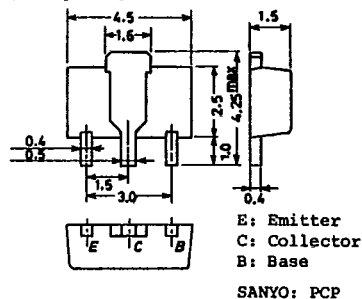
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- 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.

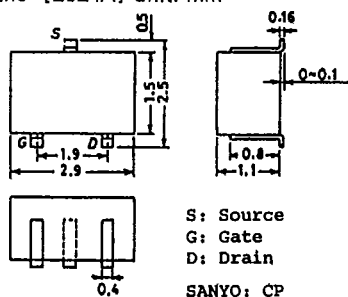
Case Outline—[2018A] unit: mm



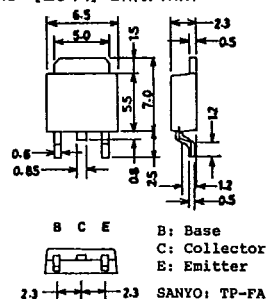
Case Outline—[2038] unit: mm



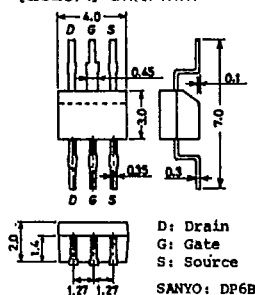
Case Outline—[2024A] unit: mm



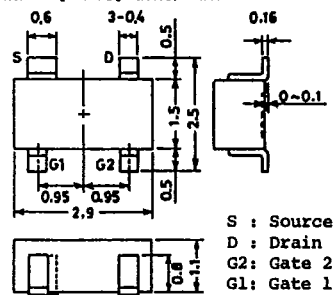
Case Outline—[2044] unit: mm



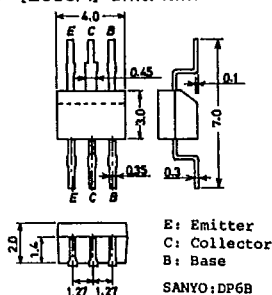
Case Outline—[2028A] unit: mm



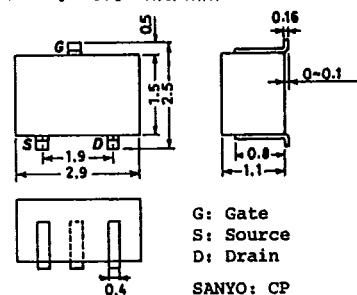
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

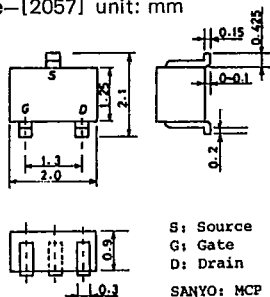


Case Outline—[2050] unit: mm

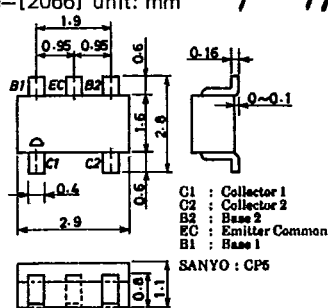


T-91-20

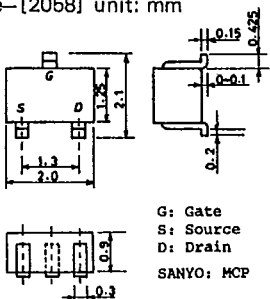
Case Outline—[2057] unit: mm



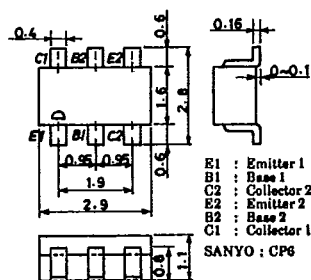
Case Outline—[2066] unit: mm



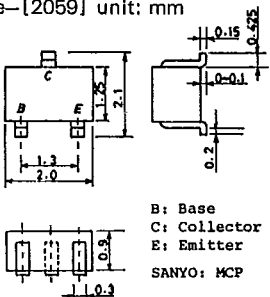
Case Outline—[2058] unit: mm



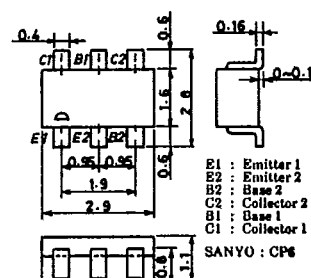
Case Outline—[2067] unit: mm



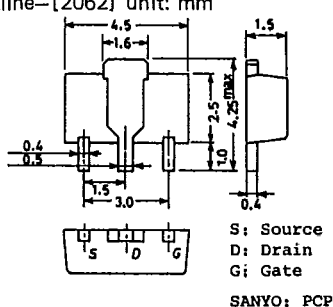
Case Outline—[2059] unit: mm



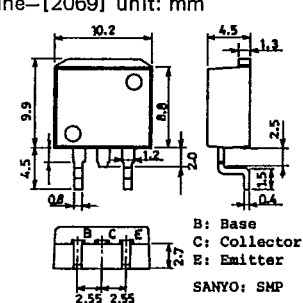
Case Outline—[2068] unit: mm



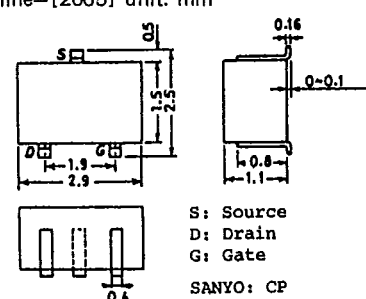
Case Outline—[2062] unit: mm



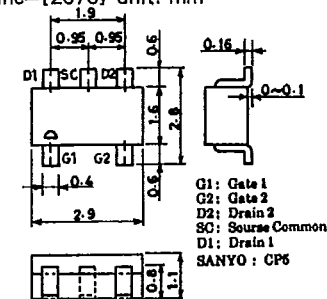
Case Outline—[2069] unit: mm



Case Outline—[2065] unit: mm

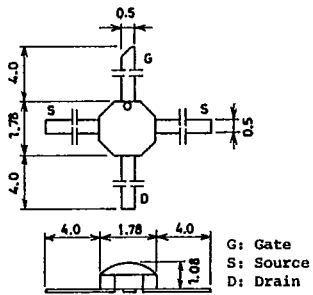


Case Outline—[2070] unit: mm

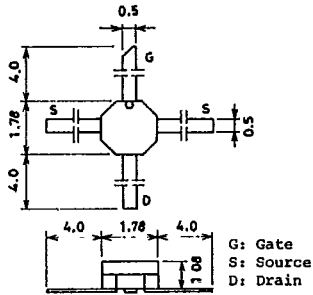


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Case Outline-[2071] unit: mm



Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

