

**2SA1496,  
2SC3859**



2018A

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

**Switching Applications**  
(with Bias Resistance R1=10kΩ)

©2106A

**Applications**

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

**Features**

- On-chip bias resistance: R<sub>1</sub>=10kohms
- Small-sized package: CP

( ): 2SA1496

**Absolute Maximum Ratings at Ta=25°C**

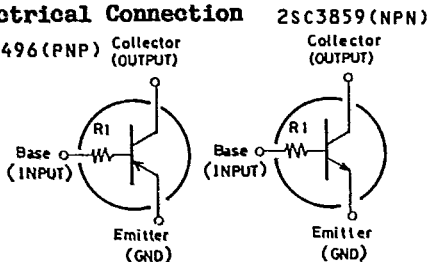
			unit
Collector to Base voltage	V <sub>CB0</sub>	(-)50	V
Collector to Emitter Voltage	V <sub>CE0</sub>	(-)50	V
Emitter to Base Voltage	V <sub>EB0</sub>	(-)5	V
Collector Current	I <sub>C</sub>	(-)100	mA
Peak Collector Current	i <sub>cp</sub>	(-)200	mA
Collector Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta=25°C**

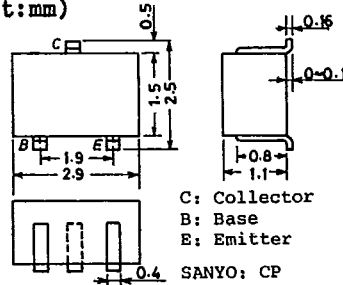
			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =(-)40V, I <sub>E</sub> =0			(-)0.1	uA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =(-)5V, I <sub>C</sub> =0			(-)0.1	uA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)10mA	100			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)5mA		250		MHz
				(200)		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =(-)10V, f=1MHz		3.5		pF
				(5.3)		pF
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)10mA, I <sub>B</sub> =(-)0.5mA		(-)0.1	(-)0.3	V
Collector to Base Breakdown Voltage	V <sub>(BR)CB0</sub>	I <sub>C</sub> =(-)10uA, I <sub>E</sub> =0		(-)50		V
Collector to Emitter Breakdown Voltage	V <sub>(BR)CE0</sub>	I <sub>C</sub> =(-)100uA, R <sub>BE</sub> =∞		(-)50		V
Input OFF Voltage	V <sub>I(off)</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =100uA		(-)0.4	(-)0.55	(-)0.8 V
Input ON Voltage	V <sub>I(on)</sub>	V <sub>CE</sub> =(-)0.2V, I <sub>C</sub> =(-)10mA		(-)0.7	(-)1.2	(-)3.0 V
Input Resistance	R <sub>1</sub>		7.0	10	13	kohm

Marking: 2SA1496: GL, 2SC3859: PY

**Electrical Connection**



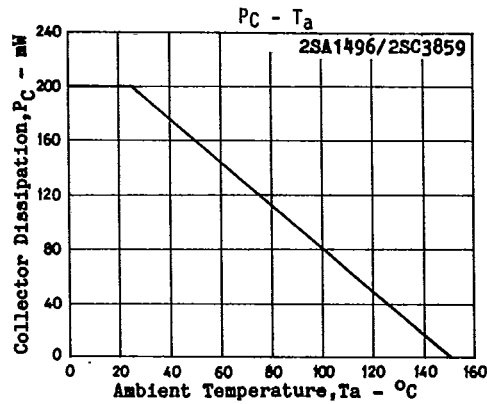
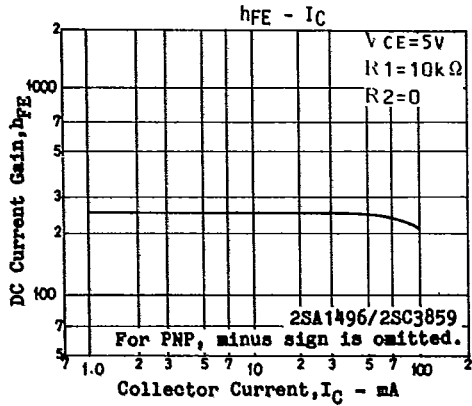
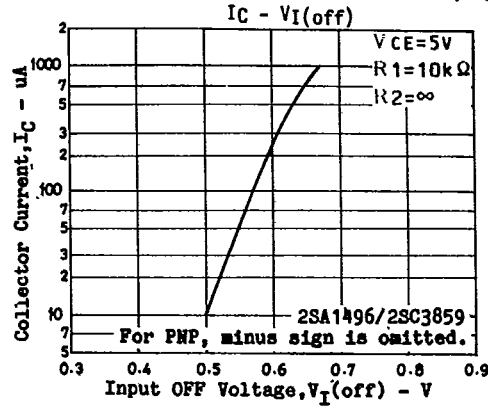
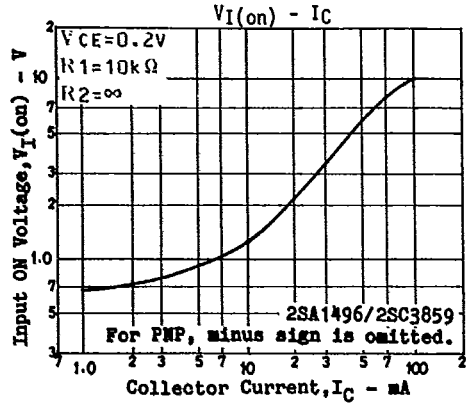
**Case Outline 2018A**  
(unit:mm)



2SA1496/2SC3859

T-37-13

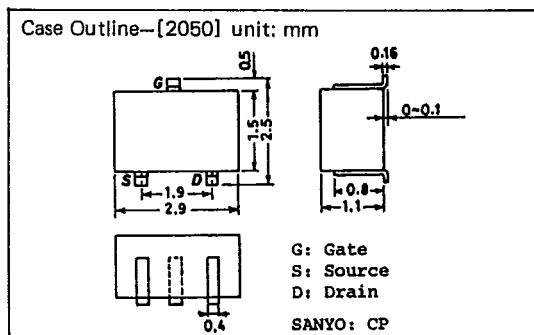
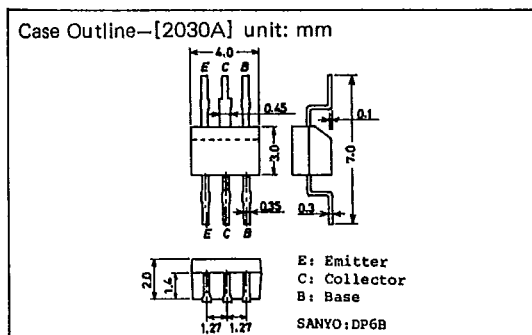
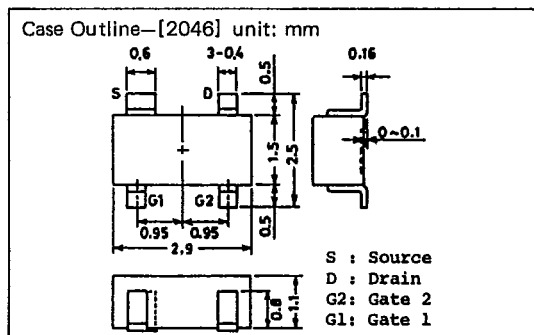
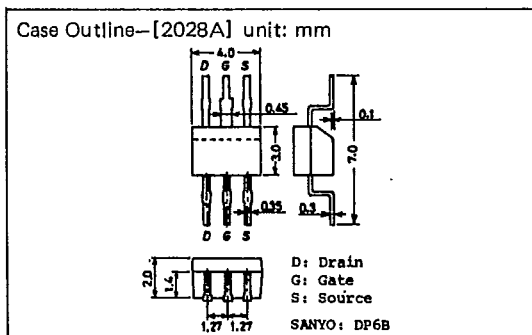
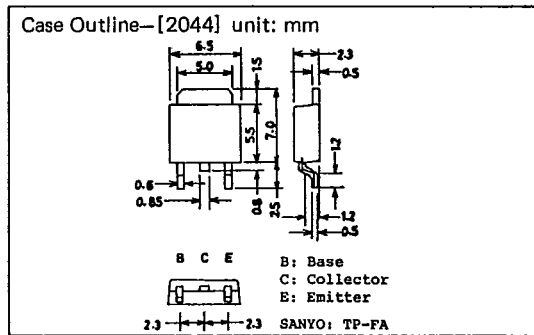
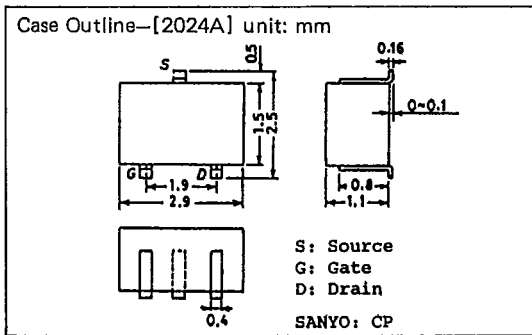
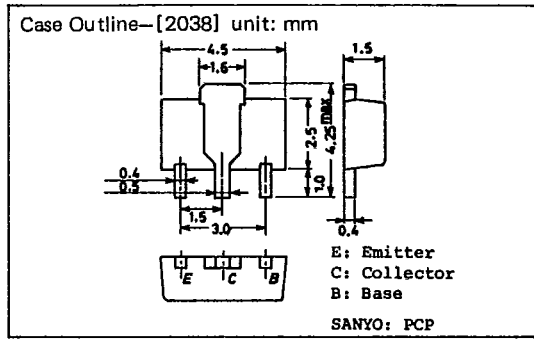
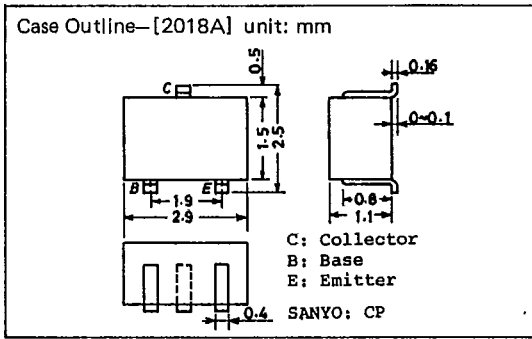
T-35-11



T-91-20

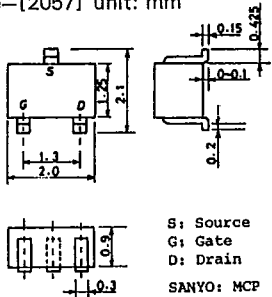
# CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- 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.



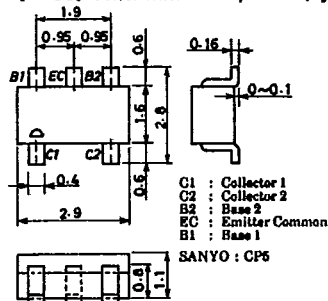
T-91-20

Case Outline—[2057] unit: mm



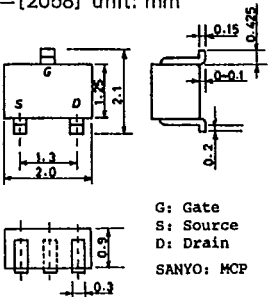
S: Source  
G: Gate  
D: Drain  
SANYO: MCP

Case Outline—[2066] unit: mm



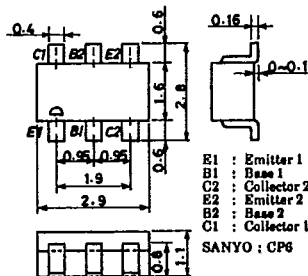
C1 : Collector 1  
C2 : Collector 2  
B2 : Base 2  
EC : Emitter Common  
B1 : Base 1  
SANYO : CP6

Case Outline—[2058] unit: mm



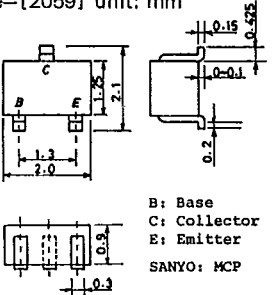
G: Gate  
S: Source  
D: Drain  
SANYO: MCP

Case Outline—[2067] unit: mm



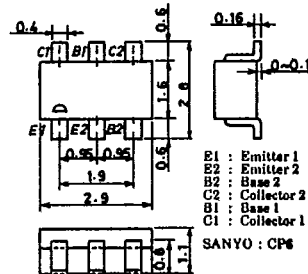
E1 : Emitter 1  
B1 : Base 1  
C2 : Collector 2  
E2 : Emitter 2  
B2 : Base 2  
C1 : Collector 1  
SANYO : CP6

Case Outline—[2059] unit: mm



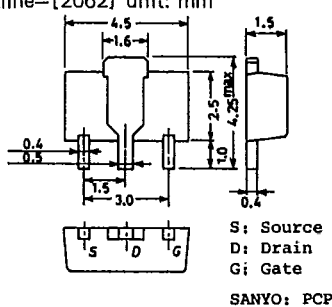
B: Base  
C: Collector  
E: Emitter  
SANYO: MCP

Case Outline—[2068] unit: mm



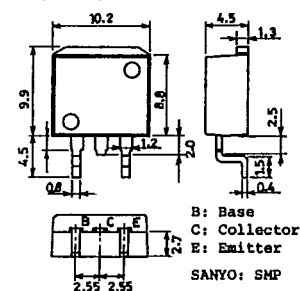
B1 : Emitter 1  
E2 : Emitter 2  
B2 : Base 2  
C2 : Collector 2  
B1 : Base 1  
C1 : Collector 1  
SANYO : CP6

Case Outline—[2062] unit: mm



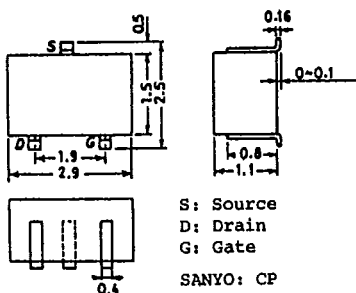
S: Source  
D: Drain  
G: Gate  
SANYO: PCP

Case Outline—[2069] unit: mm



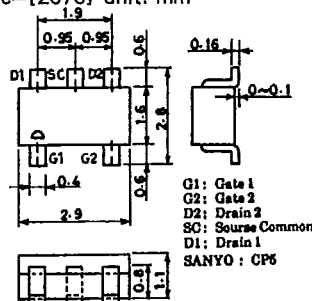
B: Base  
C: Collector  
E: Emitter  
SANYO: SMP

Case Outline—[2065] unit: mm



S: Source  
D: Drain  
G: Gate  
SANYO: CP

Case Outline—[2070] unit: mm



G1 : Gate 1  
G2 : Gate 2  
D2 : Drain 2  
SC : Source Common  
D1 : Drain 1  
SANYO : CP6

T-9120

