



No.2107A

# 2SA1497/2SC3860

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:  $R_1=10k\Omega$
- Small-sized package: SPA

( ): 2SA1497

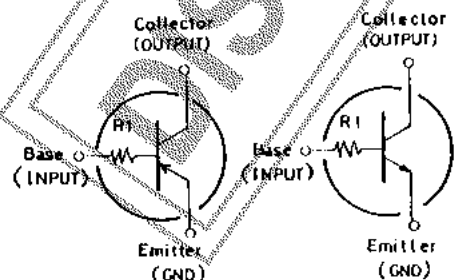
### Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

		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
Collector Current(Pulse)	$I_{CP}$	(-)200 mA
Collector Dissipation	$P_C$	300 mW
Junction Temperature	$T_j$	150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ\text{C}$

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

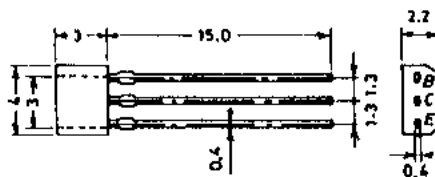
		min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$ $V_{CE}=(-)40V, I_E=0$			(-)0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$ $V_{EB}=(-)5V, I_C=0$			(-)0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$ $V_{CE}=(-)5V, I_C=(-)10\text{mA}$	100			
Gain-Bandwidth Product	$f_T$ $V_{CE}=(-)10V, I_C=(-)5\text{mA}$		250		MHz
			(200)		MHz
Output Capacitance	$C_{ob}$ $V_{CE}=(-)10V, f=1\text{MHz}$		3.7		pF
			(5.5)		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$ $I_C=(-)10\text{mA}, I_B=(-)0.5\text{mA}$		(-)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
Input OFF Voltage	$V_I(off)$ $V_{CE}=(-)5V, I_C=(-)100\mu\text{A}$	(-)0.4	(-)0.55	(-)0.8	V
Input ON Voltage	$V_I(on)$ $V_{CE}=(-)0.2V, I_C=(-)10\text{mA}$	(-)0.7	(-)1.2	(-)3.0	V
Input Resistance	$R_I$	7.0	10	13	k $\Omega$

### Electrical Connection



2SA1497(PNP) 2SC3860(NPN)

### Case Outline 2033 (unit:mm)

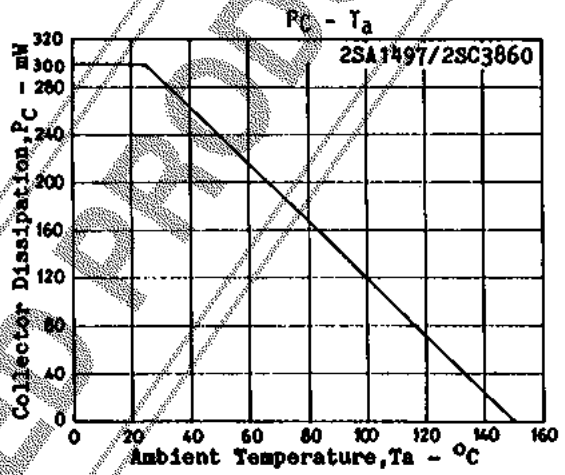
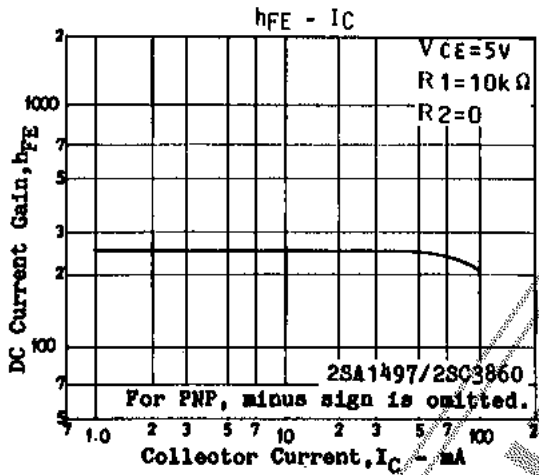
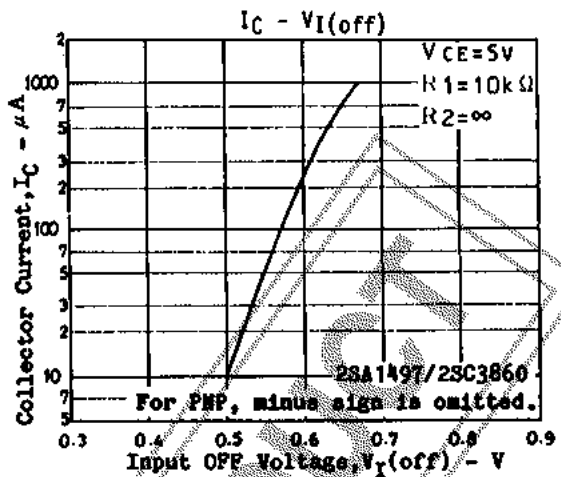
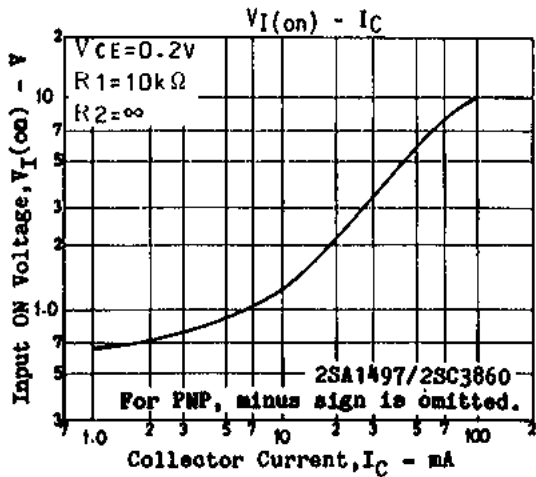


B: Base  
C: Collector  
E: Emitter  
SANYO: SPA

Specifications and information herein are subject to change without notice.

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