Ordering number : EN 2107A

SANYO Semiconductors

DATA SHEET

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1497/2SC3860 — Switching Applications (with Bias Resistance)

Applications

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

Features

. On-chip bias resistance: R_1=10kΩ
. Small-sized package: SPA

( ): 2SA1497

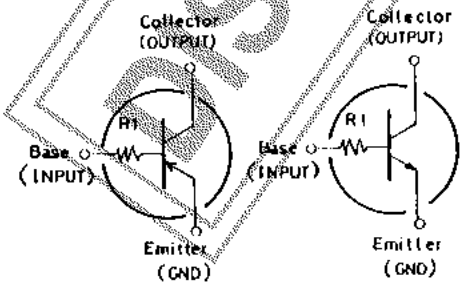
Absolute Maximum Ratings at Ta=25°C

			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	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Electrical Characteristics at Ta=25°C

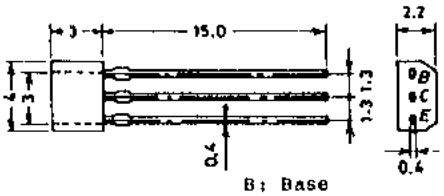
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)40,I_E=0			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)5V,I_C=0			(-)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(-)5V,I_C=(-)10mA	100			
Gain-Bandwidth Product	f_T	V_{CE}=(-)10V,I_C=(-)5mA		250		MHz
				(200)		MHz
Output Capacitance	C_{ob}	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	$V_{(BR)CBO}$	I_C=(-)10μA,I_E=0	(-)50			V
Collector to Emitter Berakdown Voltage	$V_{(BR)CEO}$	I_C=(-)100μA,R_{BE}=∞	(-)50			V
Input OFF Voltage	V_I(off)	V_{CE}=(-)5V,I_C=(-)100μA	(-)0.4	(-)0.55	(-)0.8	V
Input ON Voltage	V_I(on)	V_{CE}=(-)0.2V,I_C=(-)10mA	(-)0.7	(-)1.2	(-)3.0	V
Input Resistance	R1		7.0	10	13	kΩ

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.

SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN