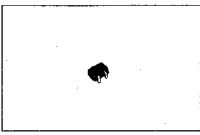




No. 1284

# 2SA1342/2SC3396



**SILICON PNP/NPN EPITAXIAL PLANAR TRANSISTOR  
FOR SWITCHING APPLICATIONS  
(WITH BIAS RESISTOR BUILT IN)**

**Applications**

Switching circuit, inverter, interface circuit, driver

**Features**

- Built-in bias resistor ( $R_1=22k\Omega$ ,  $R_2=22k\Omega$ ).
- Small-sized package (CP).

( ): 2SA1342

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

			unit
Collector to Base Voltage	$V_{CB0}$	(-)50	V
Collector to Emitter Voltage	$V_{CEO}$	(-)50	V
Emitter to Base Voltage	$V_{EBO}$	(-)10	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	$^\circ\text{C}$

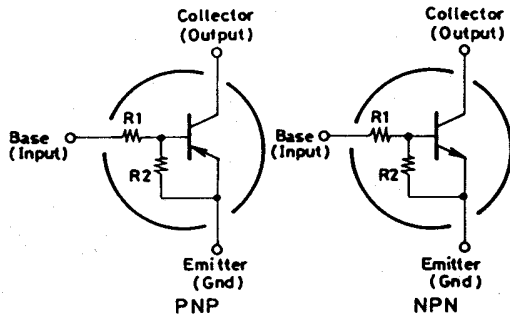
**Electrical Characteristics/ $T_a=25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=(-)40\text{V}$ , $I_E=0$			(-)0.1	$\mu\text{A}$
Collector Cutoff Current	$I_{CEO}$	$V_{CE}=(-)40\text{V}$ , $I_B=0$			(-)0.5	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)5\text{V}$ , $I_C=0$	(-)70	(-)113	(-)150	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=(-)5\text{V}$ , $I_C=(-)5\text{mA}$	50			
Gain Band-width product	$f_T$	$V_{CE}=(-)10\text{V}$ , $I_C=(-)5\text{mA}$		250 (200)		MHz
Output Capacitance	$c_{ob}$	$V_{CB}=(-)10\text{V}$ , $f=1\text{MHz}$		3.5 (5.3)		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

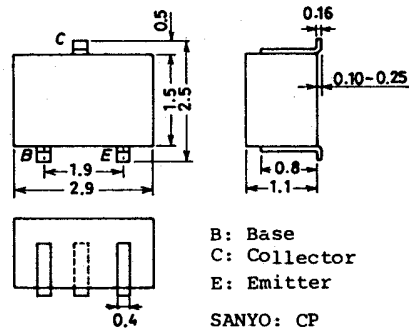
**Marking on Device**

2SA1342: CL, 2SC3396: CY

**Electrical Connection**



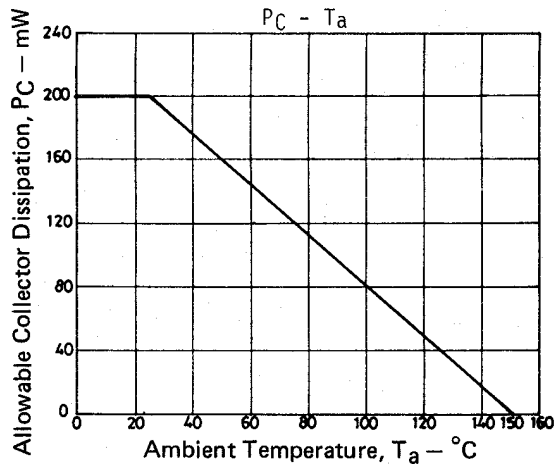
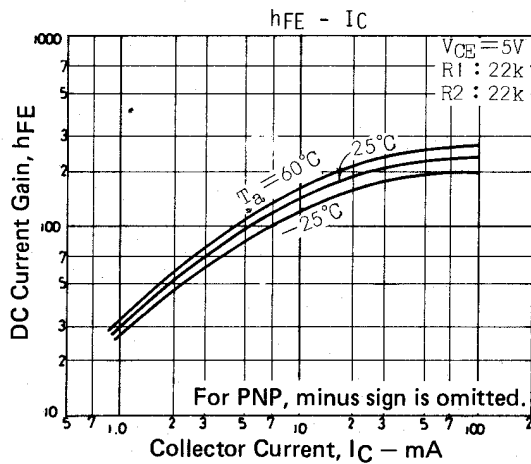
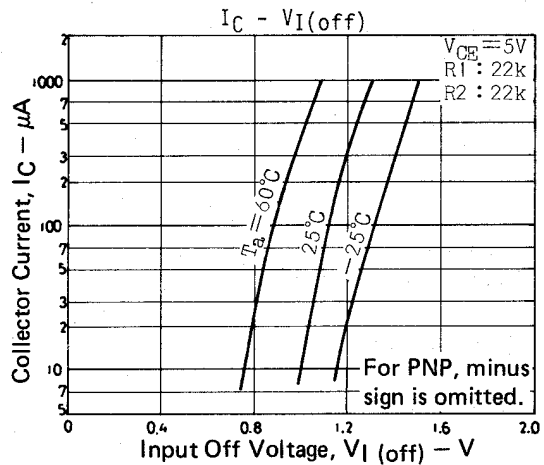
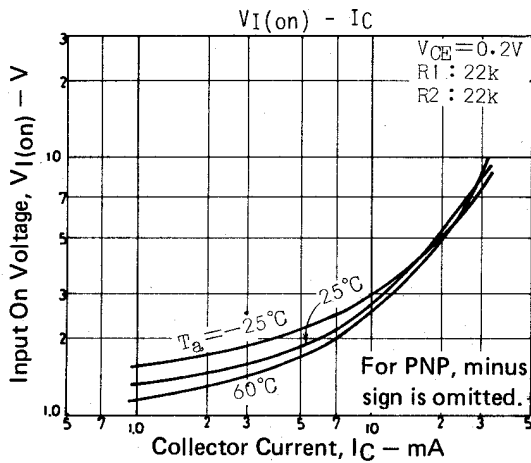
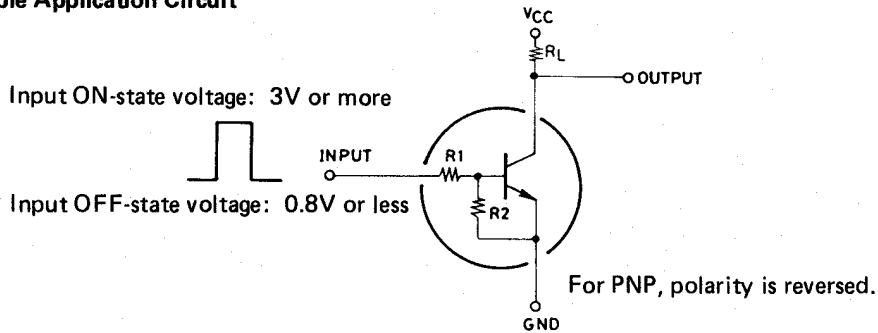
**Case Outline 2018  
(unit: mm)**



These specifications are subject to change without notice.

			min	typ	max	unit
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-50)			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-50)			V
Input Off Voltage	$V_{I(off)}$	$V_{CE}=(-)5V, I_C=(-)100\mu A$	(-0.8)	(-1.1)	(-1.5)	V
Input On Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2V, I_C=(-)5mA$	(-1.0)	(-1.9)	(-3.0)	V
Input Resistance	$R_1$		15	22	29	k $\Omega$
Input Resistance Ratio	$R_1/R_2$		0.9	1.0	1.1	-

■ Sample Application Circuit



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