

**SANYO**

No.4720

**2SA1865**

PNP Epitaxial Planar Silicon Transistor

Muting Circuits, Driver Applications

**Features**

- On-chip bias resistors ( $R_1 = 10k\Omega$ ,  $R_2 = 10k\Omega$ ).
- Very small-sized package making 2SA1865-applied sets small and slim.
- Small ON resistance.
- High gain-bandwidth product  $f_T$ .

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

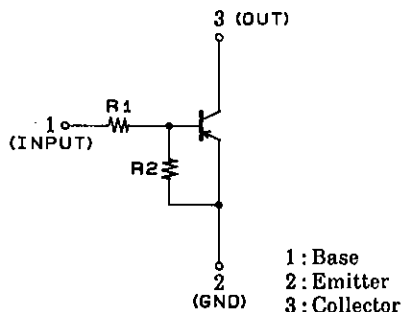
			unit
Collector-to-Base Voltage	$V_{CBO}$	-15	V
Collector-to-Emitter Voltage	$V_{CEO}$	-15	V
Emitter-to-Base Voltage	$V_{EBO}$	-10	V
Input Voltage	$V_{IN}$	-14	V
Collector Current	$I_C$	-100	mA
Collector Current (Pulse)	$I_{CP}$	-200	mA
Base Current	$I_B$	-20	mA
Collector Dissipation	$P_C$	150	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

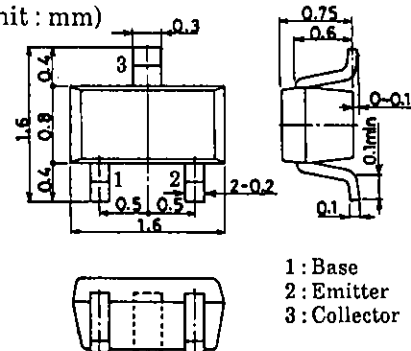
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = -10\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector Cutoff Current	$I_{CEO}$	$V_{CE} = -10\text{V}, I_B = 0$			-0.5	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$	-195	-250	-360	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = -2\text{V}, I_C = -10\text{mA}$	50			
Gain-Bandwidth Product	$f_T$ *	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$		600		MHz
Output Capacitance	$C_{ob}$ *	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		0.9		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -2.5\text{mA}, I_B = -0.25\text{mA}$	-20	-60		mV
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-15			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-15			V
Input OFF-State Voltage	$V_{IN(off)}$	$V_{CE} = -2\text{V}, I_C = -100\mu\text{A}$	-0.8	-1.2	-1.5	V
Input ON-State Voltage	$V_{IN(on)}$	$V_{CE} = -0.3\text{V}, I_C = -10\text{mA}$	-1.0	-2.0	-4.0	V
Input Resistance	$R_1$		7.0	10	13	k $\Omega$
Resistance Ratio	$R_1/R_2$		0.9	1.0	1.1	
ON Resistance	$R_{on}$	$V_{IN} = -5\text{V}, f = 1\text{MHz}$		6.0		$\Omega$

\* : Characteristic of the constituent transistor.

Marking: BA

**Electrical Connection****Package Dimensions 2106A**

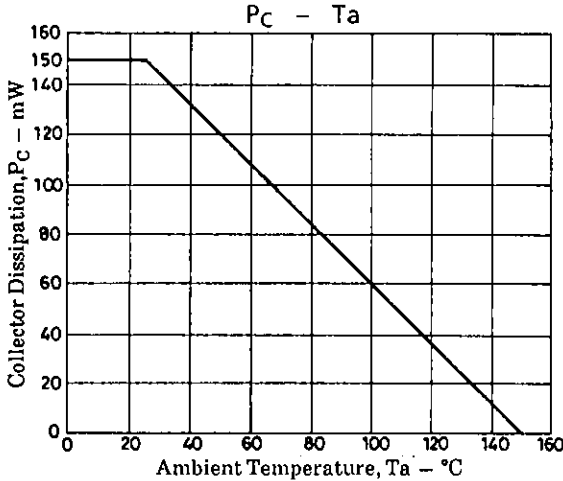
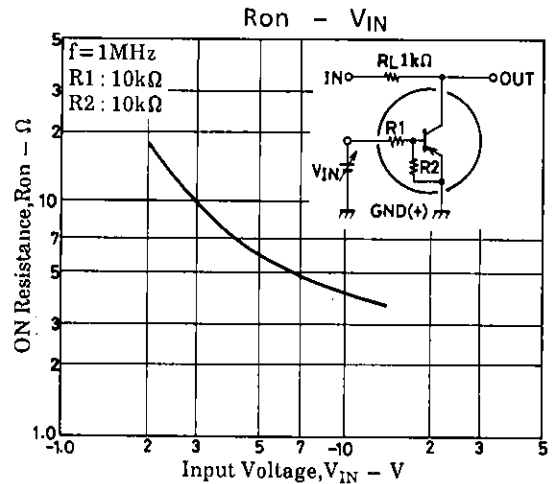
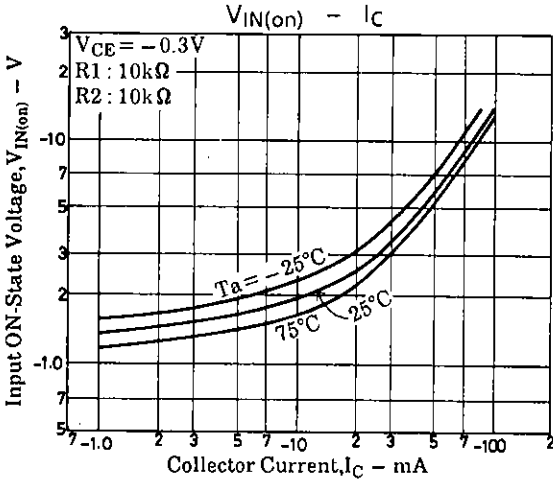
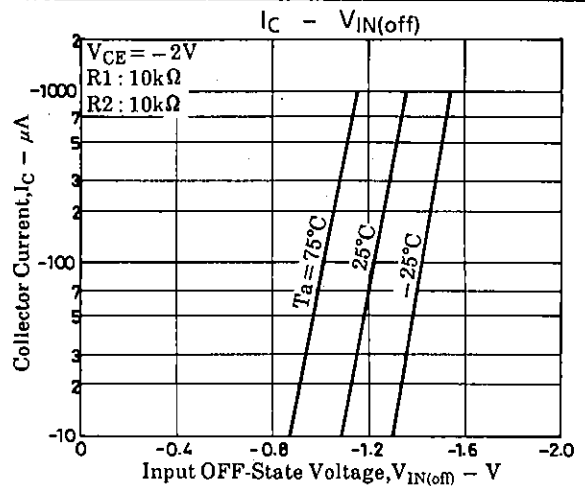
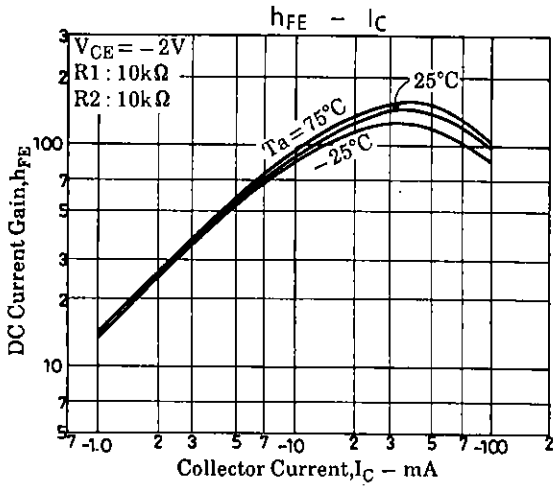
(unit : mm)



SANYO : SMCP

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN



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