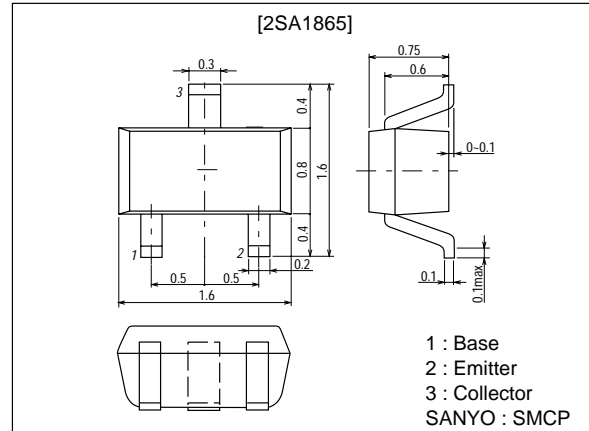


**2SA1865****Muting Circuits, Driver Applications****Features**

- On-chip bias resistors (R1=10kΩ, R2=10kΩ).
- Ultrasmall-sized package making 2SA1865-applied sets to small and slim.
- Small ON resistance.
- High gain-bandwidth product f_T .

Package Dimensionsunit:mm
2106A**Specifications****Absolute Maximum Ratings** at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=-10\text{V}, I_E=0$			-0.1	μA
Collector Cutoff Current	I_{CEO}	$V_{CE}=-10\text{V}, I_E=0$			-0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$	-195	-250	-360	μA
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

* : Characteristic of the constituent transistor.

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

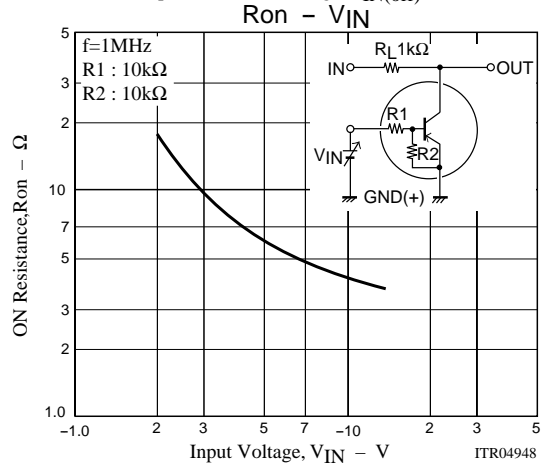
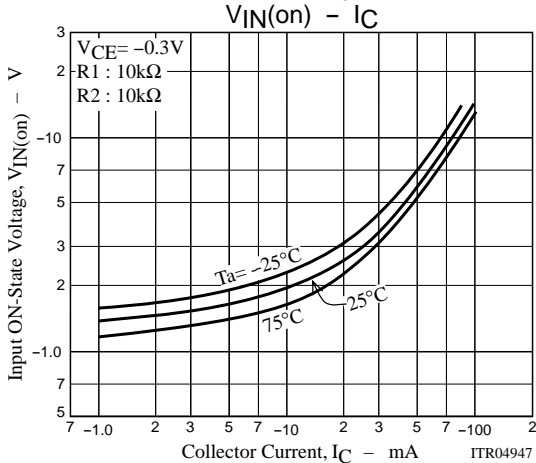
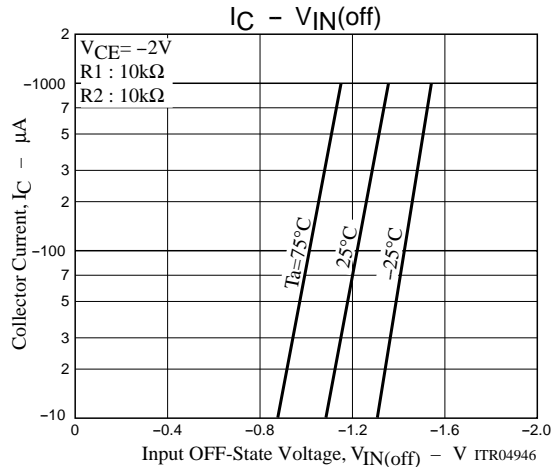
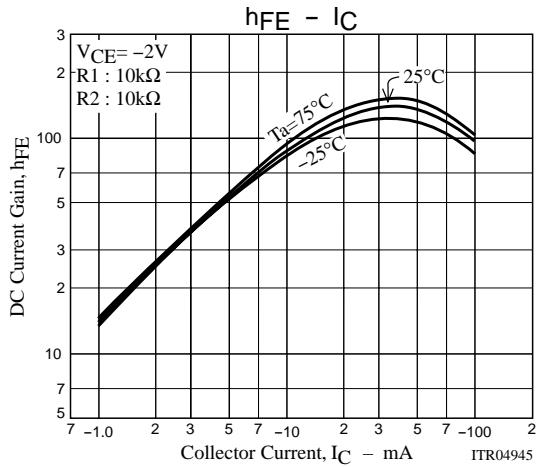
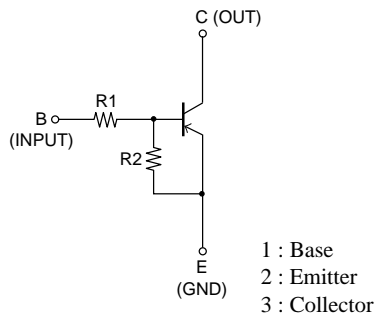
2SA1865

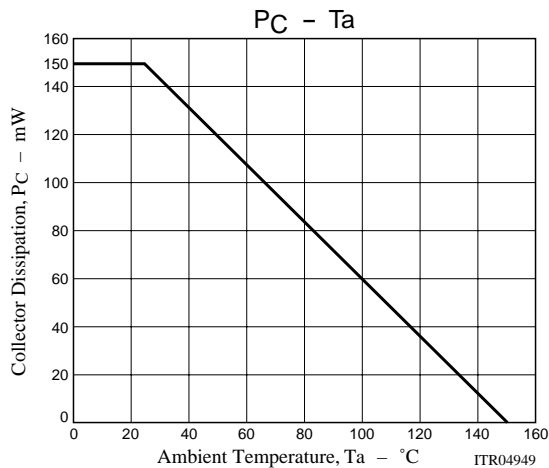
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2.5\text{mA}$, $I_B = -0.25\text{mA}$		-20	-60	mV
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$, $I_E = 0$	-15			V
Collector-to-Emitter 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	R1		7.0	10	13	k Ω
Resistance Ratio	R1/R2		0.9	1.0	1.1	
On Resistance	R_{on}	$V_{IN} = -5\text{V}$, $f = 1\text{MHz}$		6.0		Ω

Marking : BA

Electrical Connection





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