

NPN Epitaxial Planar Silicon Transistor

2SC4922



Muting Circuit, Driver Applications

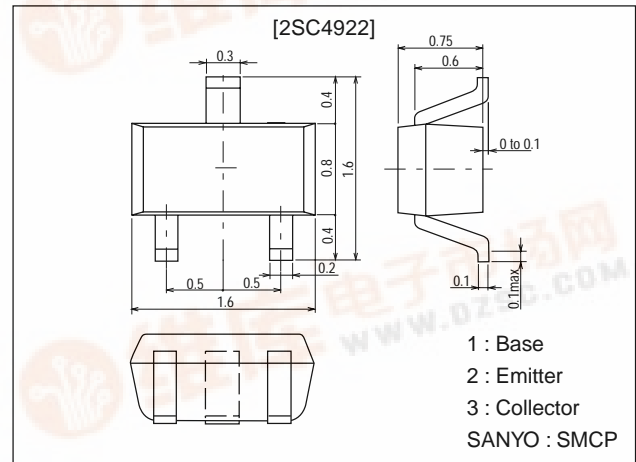
Features

- High DC current gain.
- On-chip bias resistance (R1=47kΩ, R2=47kΩ).
- Very small-sized package permitting 2SC4922-applied sets to be made smaller and slimmer.
- Small ON resistance.

Package Dimensions

unit:mm

2106A



Specifications

Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|------------------|------------|-------------|------|
| Collector-to-Base Voltage | V _{CB0} | | 25 | V |
| Collector-to-Emitter Voltage | V _{CEO} | | 20 | V |
| Emitter-to-Base Voltage | V _{EBO} | | 10 | V |
| Input Voltage | V _{IN} | | 18 | 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 | °C |
| Storage Temperature | T _{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|------------------|---|---------|-----|-----|------|
| | | | min | typ | max | |
| Collector Cutoff Current | I _{CB0} | V _{CB} =20V, I _E =0 | | | 0.1 | μA |
| | I _{CEO} | V _{CE} =15V, I _B =0 | | | 0.5 | μA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} =5V, I _C =0 | 30 | 53 | 80 | μA |
| DC Current Gain | h _{FE} | V _{CE} =2V, I _C =5mA | 200 | | | |
| Gain-Bandwidth Product | f _T * | V _{CE} =5V, I _C =10mA | | 240 | | MHz |
| Output Capacitance | Cob* | V _{CB} =10V, f=1MHz | | 1.4 | | pF |

* Characteristic of the constituent transistor.

Marking : GA

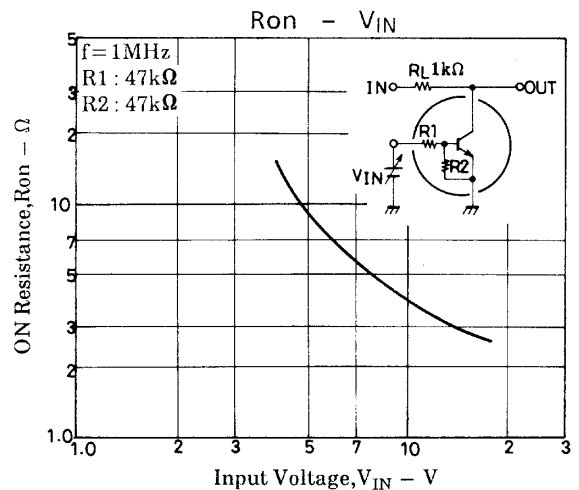
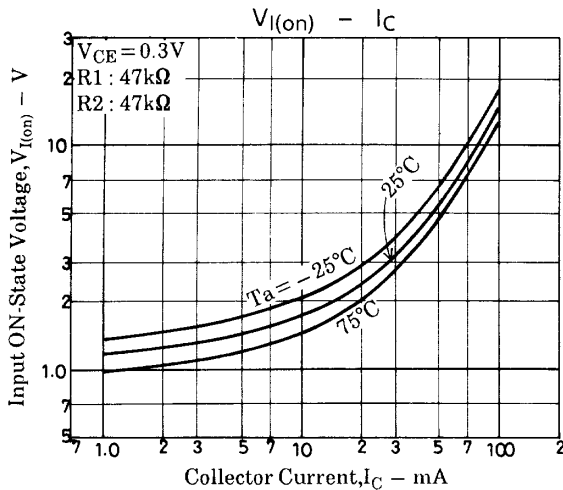
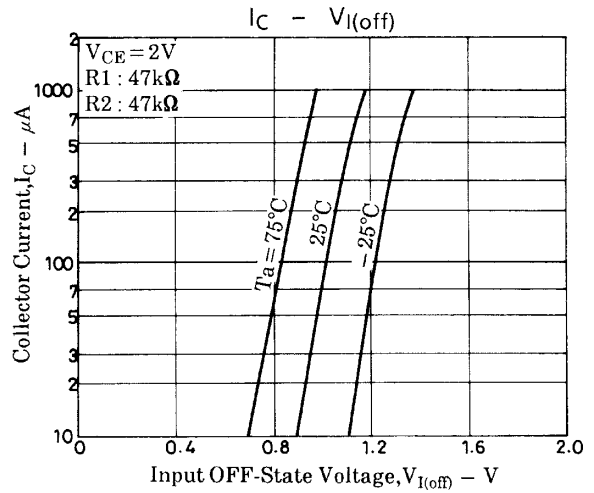
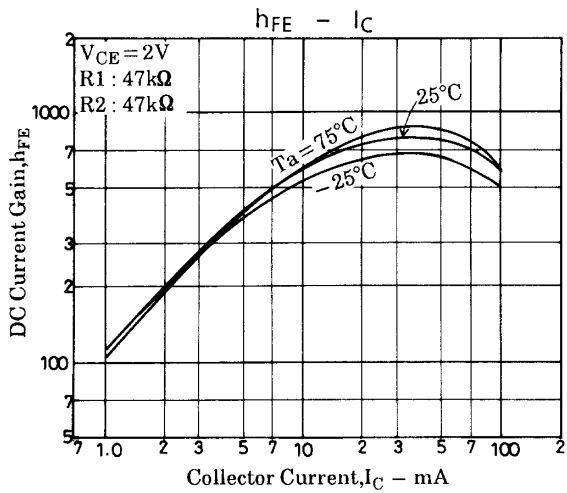
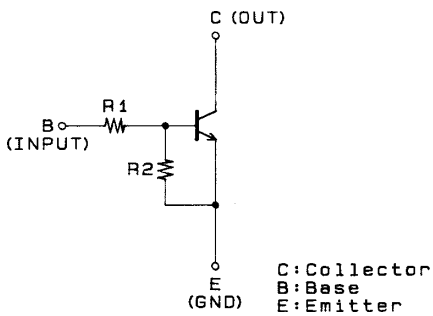
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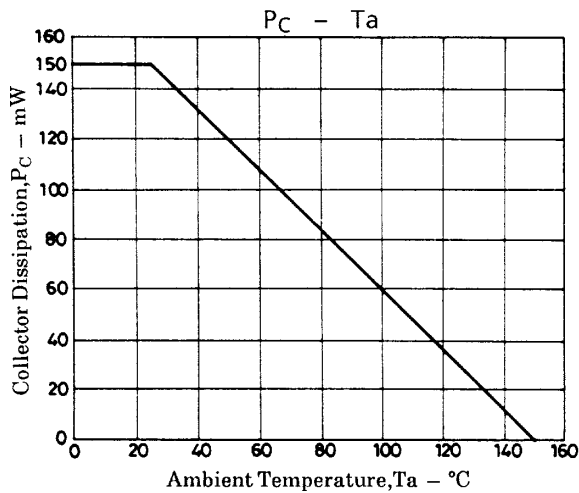
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|---------------------------|---------|-----|-----|------------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=2mA, I_B=0.2mA$ | | 10 | 30 | mV |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 25 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=1mA, R_{BE}=\infty$ | 20 | | | V |
| Input OFF-State Voltage | $V_{I(off)}$ | $V_{CE}=2V, I_C=100\mu A$ | 0.7 | 1.0 | 1.4 | V |
| Input ON-State Voltage | $V_{I(on)}$ | $V_{CE}=0.3V, I_C=5mA$ | 1.0 | 1.5 | 3.0 | V |
| Input Resistance | R1 | | 32 | 47 | 62 | k Ω |
| Resistance Ratio | R1/R2 | | 0.9 | 1.0 | 1.1 | |
| ON Resistance | Ron | $V_{IN}=10V, f=1MHz$ | | 4.0 | | Ω |

Electrical Connection



2SC4922



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