

2SA1519/2SC3913**Switching Applications (with Bias Resistance)****Applications**

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

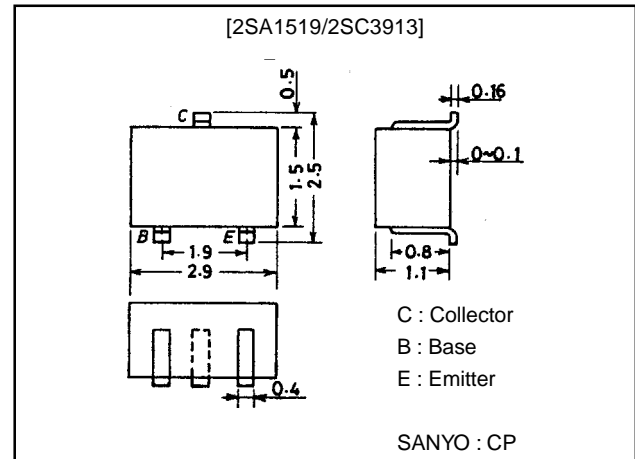
Features

- On-chip bias resistance : R1=4.7kΩ, R2=4.7kΩ.
- Small-sized package : CP.
- Large current capacity : I_C=500mA.

Package Dimensions

unit:mm

2018A



() : 2SA1519

Specifications**Absolute Maximum Ratings at Ta = 25°C**

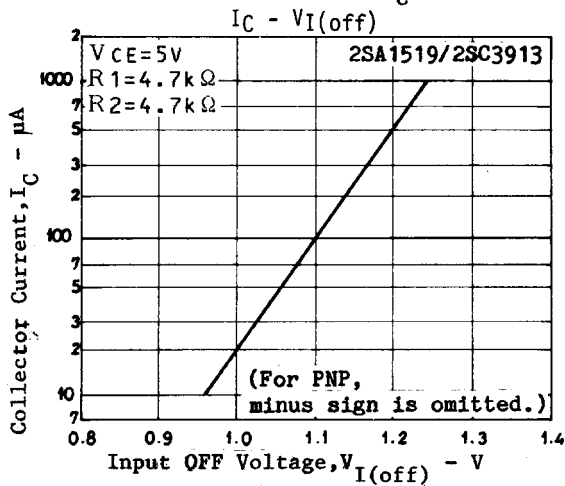
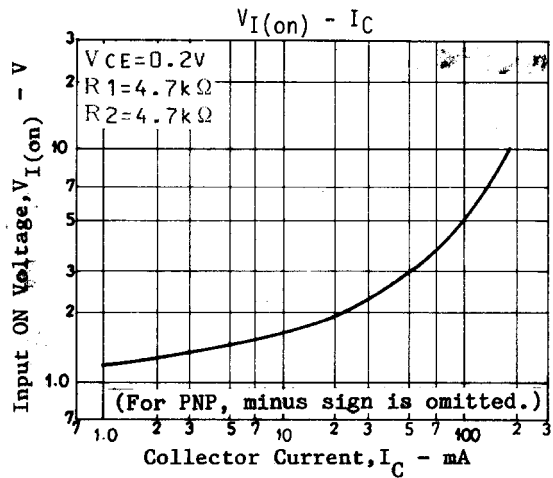
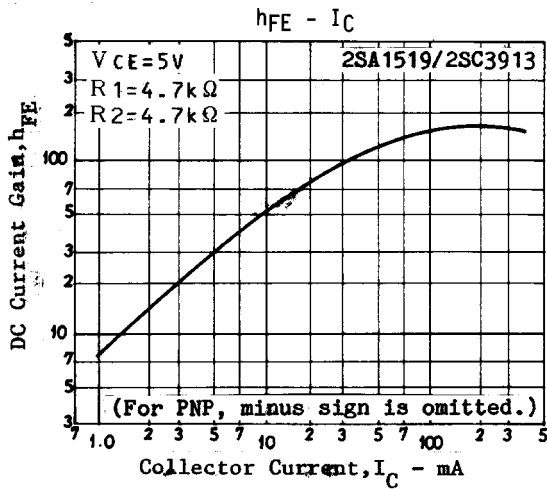
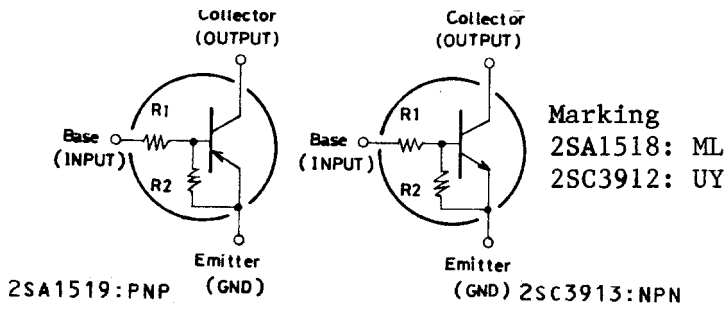
| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|------------------|------------|-------------|------|
| Collector-to-Base Voltage | V _{CB0} | | (-)50 | V |
| Collector-to-Emitter Voltage | V _{CEO} | | (-)50 | V |
| Emitter-to-Base Voltage | V _{EBO} | | (-)6 | V |
| Collector Current | I _C | | (-)500 | mA |
| Collector Current (Pulse) | I _{CP} | | (-)800 | mA |
| Collector Dissipation | P _C | | 200 | 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} =(-)40V, I _E =0 | | | (-)0.1 | μA |
| | I _{CEO} | V _{CE} =(-)40V, I _B =0 | | | (-)0.5 | μA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} =(-)5V, I _C =0 | (-)410 | (-)532 | (-)760 | μA |
| DC Current Gain | h _{FE} | V _{CE} =(-)5V, I _C =(-)20mA | 50 | | | |
| 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 =(-)40mA, I _B =(-)2mA | | (-)0.1 | (-)0.3 | V |
| Collector-to-Base Breakdown Voltage | V _{(BR)CBO} | I _C =(-)10μA, I _E =0 | (-)50 | | | V |
| Collector-to-Emitter Breakdown Voltage | V _{(BR)CEO} | I _C =(-)100μA, R _{BE} =∞ | (-)50 | | | V |
| Input OFF-State Voltage | V _{I(off)} | V _{CE} =(-)5V, I _C =(-)100μA | (-)0.8 | (-)1.1 | (-)1.5 | V |
| Input ON-State Voltage | V _{I(on)} | V _{CE} =(-)0.2V, I _C =(-)20mA | (-)1.0 | (-)1.9 | (-)4.0 | V |
| Input Resistance | R1 | | 3.3 | 4.7 | 6.1 | kΩ |
| Resistance Ratio | R1/R2 | | 0.9 | 1.0 | 1.1 | |

2SA1519/2SC3913

Electrical Connection



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