

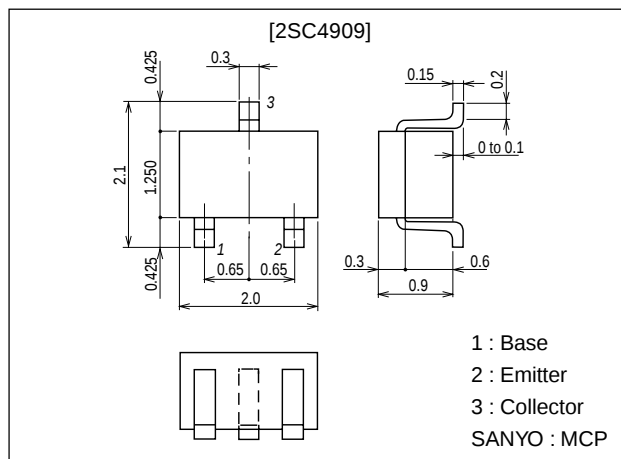
**2SC4909****Muting Circuits, Drivers****Features**

- High DC current gain.
- On-chip bias resistance ( $R_1=47k\Omega$ ,  $R_2=47k\Omega$ ).
- Very small-sized package permitting 2SC4909-applied sets to be made smaller and slimmer.
- Small ON resistance.

**Package Dimensions**

unit:mm

2059B

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

| Parameter                    | Symbol    | Conditions | Ratings     | Unit             |
|------------------------------|-----------|------------|-------------|------------------|
| Collector-to-Base Voltage    | $V_{CB0}$ |            | 25          | V                |
| Collector-to-Emitter Voltage | $V_{CE0}$ |            | 20          | V                |
| Emitter-to-Base Voltage      | $V_{EB0}$ |            | 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        | $P_C$     |            | 200         | 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 | $I_{CB0}$ | $V_{CB}=20\text{V}$ , $I_E=0$          |         |     | 0.1 | $\mu\text{A}$ |
|                          | $I_{CE0}$ | $V_{CE}=15\text{V}$ , $I_B=0$          |         |     | 0.5 | $\mu\text{A}$ |
| Emitter Cutoff Current   | $I_{EB0}$ | $V_{EB}=5\text{V}$ , $I_C=0$           | 30      | 53  | 80  | $\mu\text{A}$ |
| DC Current Gain          | $h_{FE}$  | $V_{CE}=2\text{V}$ , $I_C=5\text{mA}$  | 200     |     |     |               |
| Gain-Bandwidth Product   | $f_T$     | $V_{CE}=5\text{V}$ , $I_C=10\text{mA}$ |         | 240 |     | MHz           |

Marking : JN

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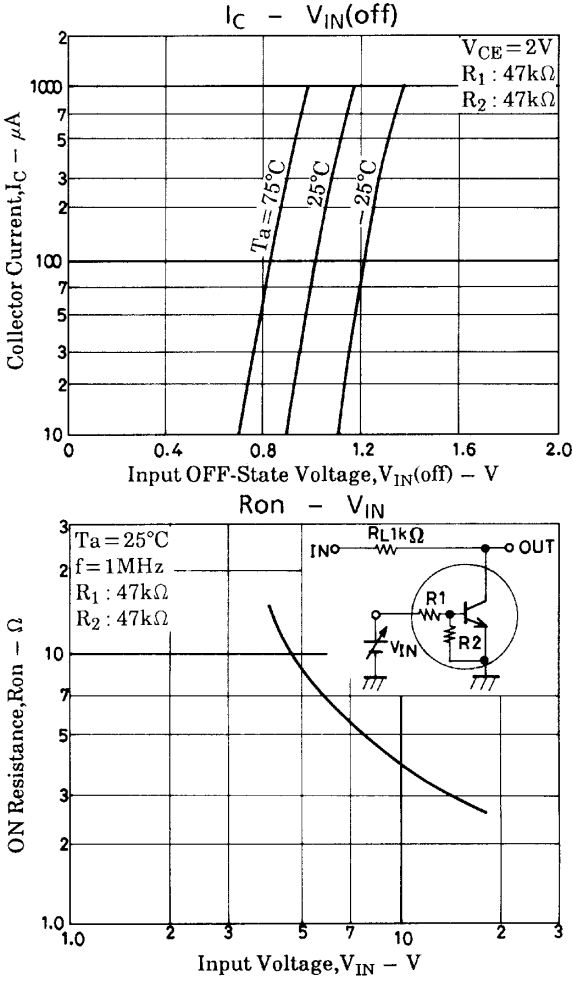
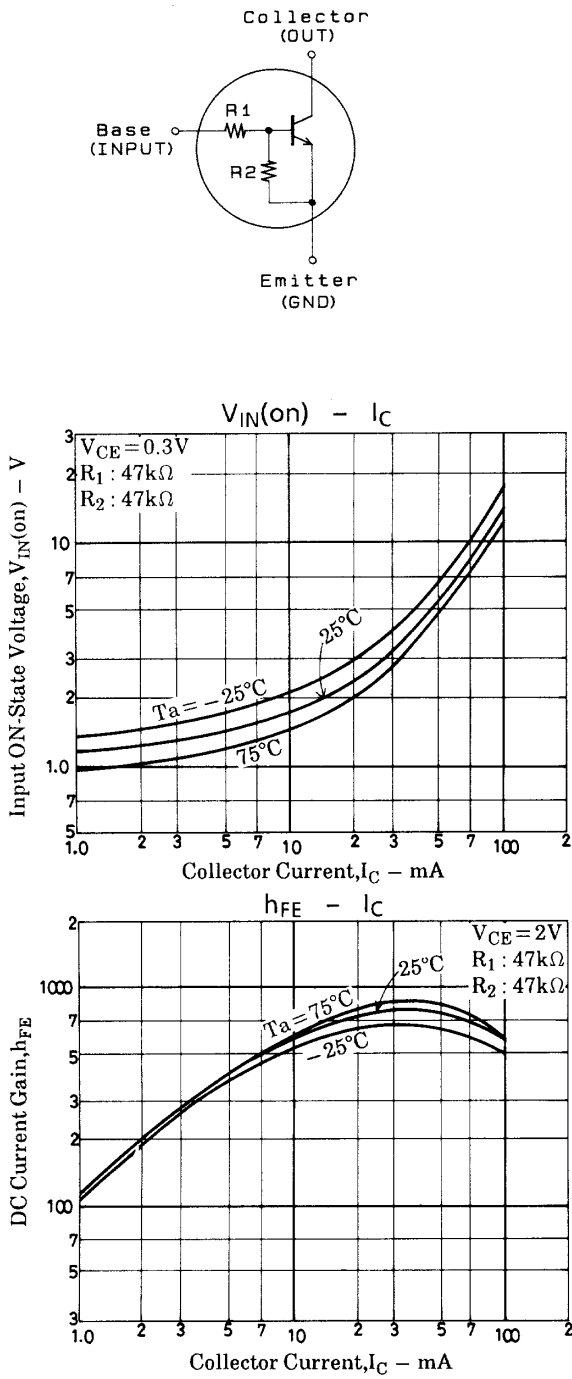
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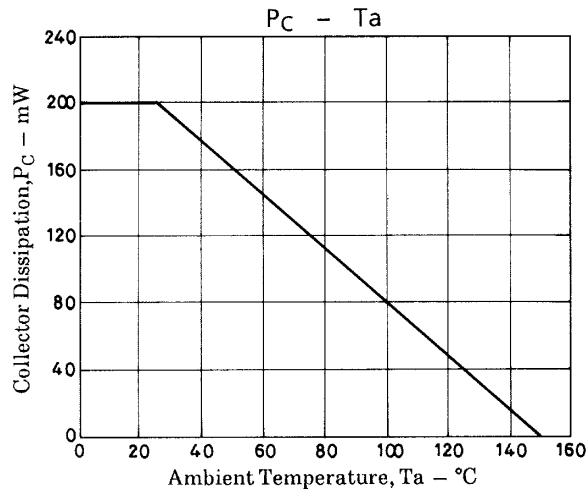
12599HA (KT)/N3093TH (KOTO) BX-0302 No.4410-1/3

2SC4909

| 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                 | $V_{IN(off)}$ | $V_{CE}=2V, I_C=100\mu A$ | 0.7     | 1.0 | 1.4 | V          |
| Input ON-State Voltage                  | $V_{IN(on)}$  | $V_{CE}=0.3V, I_C=5mA$    | 1.0     | 1.5 | 3.0 | V          |
| Input Resistance                        | $R_1$         |                           | 32      | 47  | 62  | k $\Omega$ |
| Resistance Ratio                        | $R_1/R_2$     |                           | 0.9     | 1.0 | 1.1 |            |
| ON Resistance                           | $R_{on}$      | $V_{IN}=10V, f=1MHz$      |         | 4.0 |     | $\Omega$   |

Electrical Connection





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