

**2SC3504**

High-Definition CRT Display, Video Output Applications

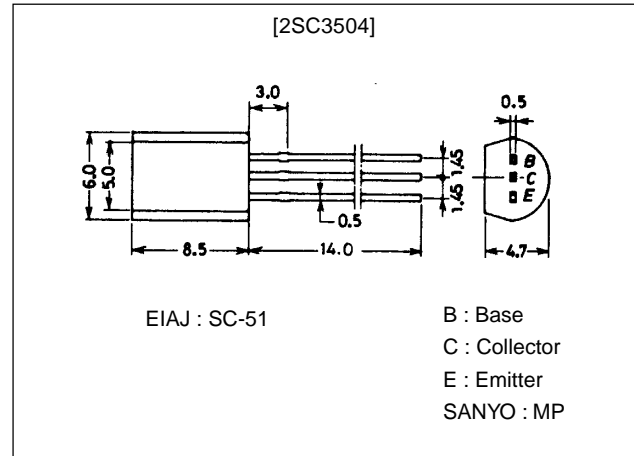
Features

- High f_T .
- Small reverse transfer capacitance.

Package Dimensions

unit:mm

2006A



Specifications

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

| Parameter | Symbol | Condition | Rating | Unit |
|------------------------------|----------|-----------|-------------|------------------|
| Collector-to-Base Voltage | V_{CB} | | 70 | V |
| Collector-to-Emitter Voltage | V_{CE} | | 60 | V |
| Emitter-to-Base Voltage | V_{EB} | | 4 | V |
| Collector Current | I_C | | 50 | mA |
| Collector Current (Pulse) | I_{CP} | | 100 | mA |
| Collector Dissipation | P_C | | 900 | mW |
| Junction Temperature | T_j | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{st} | | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|--------------------------------------|---------|----|-----|-------|
| | | | mA | mA | mA | |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=40\text{V}, I_E=0$ | | | 0A | μ |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=3\text{V}, I_C=0$ | | | 1A | μ |
| DC Current Gain | h_{FE} | $V_{CE}=10\text{V}, I_C=10\text{mA}$ | 60* | | 320 | |
| Gain-Bandwidth Product | T | $V_{CE}=10\text{V}, I_C=10\text{mA}$ | 300 | 50 | | MHz |
| Base-to-Collector Time Constant | t_{bc} | $V_{CE}=10\text{V}, I_C=10\text{mA}$ | | 80 | 2s | p |
| Reverse Transfer Capacitance | C_M | $V_{CB}=0\text{V}, f=1\text{MHz}$ | | 16 | 1F | p |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=20\text{mA}, I_B=2\text{mA}$ | | | 0.5 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=20\text{mA}, I_B=2\text{mA}$ | | | 1.0 | V |

* : The 2SC3504 is classified by 10mA h_{FE} as follows :

| | | | | | | | | |
|----|---|-----|-----|---|-----|-----|---|-----|
| 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|-----|-----|---|-----|-----|---|-----|

■ 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.

SANYO Electric Co., Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

N2098HA (KT)/4237AT/3205KI, TS No.1438-1/3

2SC3504

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|---------|--------------------------|---------|-----|-----|------|
| | | | min | typ | max | |
| Collector-to-Base Breakdown Voltage | (BR)CBO | $I_C=10\mu A, I_E=0$ | 7V | | | |
| Collector-to-Emitter Breakdown Voltage | (BR)CEO | $I_C=1mA, R_{BE}=\infty$ | 6V | | | |
| Emitter-to-Base Breakdown Voltage | (BR)EBO | $I_E=10\mu A, I_C=0$ | | | | V |

