

**SANYO**

No.1390D

**2SA1353/2SC3417**

PNP/NPN Epitaxial Planar Silicon Transistors

High-Definition CRT Display

Video Output Applications

**Applications**

- Ultrahigh-definition CRT display.
- Color TV chroma output, high-voltage driver applications

**Features**

- High breakdown voltage :  $V_{CEO} \geq 300V$ .
- Excellent high frequency characteristics :  $C_{re} = 1.8pF$ (typ).
- Adoption of MBIT process.

( ) : 2SA1353

**Absolute Maximum Ratings at  $T_a = 25^\circ C$** 

|                              |           |             | unit       |
|------------------------------|-----------|-------------|------------|
| Collector-to-Base Voltage    | $V_{CBO}$ | (- )300     | V          |
| Collector-to-Emitter Voltage | $V_{CEO}$ | (- )300     | V          |
| Emitter-to-Base Voltage      | $V_{EBO}$ | (- )5       | V          |
| Collector Current            | $I_C$     | (- )100     | mA         |
| Collector Current (Pulse)    | $I_{CP}$  | (- )200     | mA         |
| Collector Dissipation        | $P_C$     | 1.2         | W          |
|                              |           | 7           | W          |
| Junction Temperature         | $T_j$     | 150         | $^\circ C$ |
| Storage Temperature          | $T_{stg}$ | -55 to +150 | $^\circ C$ |

 $T_c = 25^\circ C$ **Electrical Characteristics at  $T_a = 25^\circ C$** 

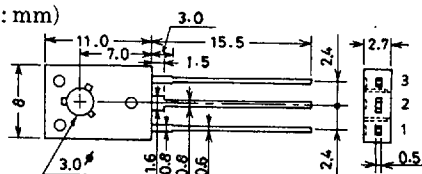
|                              |               |                                  | min     | typ   | max     | unit    |
|------------------------------|---------------|----------------------------------|---------|-------|---------|---------|
| Collector Cutoff Current     | $I_{CBO}$     | $V_{CB} = (-)200V, I_E = 0$      |         |       | (- )0.1 | $\mu A$ |
| Emitter Cutoff Current       | $I_{EBO}$     | $V_{EB} = (-)4V, I_C = 0$        |         |       | (- )0.1 | $\mu A$ |
| DC Current Gain              | $h_{FE}$      | $V_{CE} = (-)10V, I_C = (-)10mA$ | 40      |       | 320     |         |
| Gain Bandwidth Product       | $f_T$         | $V_{CE} = (-)30V, I_C = (-)10mA$ |         | 70    |         | MHz     |
| C-E Saturation Voltage       | $V_{CE(sat)}$ | $I_C = (-)20mA, I_E = (-)2mA$    |         |       | (- )0.6 | V       |
| B-E Saturation Voltage       | $V_{BE(sat)}$ | $I_C = (-)20mA, I_E = (-)2mA$    |         |       | (- )1.0 | V       |
| C-B Breakdown Voltage        | $V_{(BR)CBO}$ | $I_C = (-)10\mu A, I_E = 0$      | (- )300 |       |         | V       |
| C-E Breakdown Voltage        | $V_{(BR)CEO}$ | $I_C = (-)1mA, R_{BE} = \infty$  | (- )300 |       |         | V       |
| E-B Breakdown Voltage        | $V_{(BR)EBO}$ | $I_E = (-)10\mu A, I_C = 0$      | (- )5   |       |         | V       |
| Output Capacitance           | $C_{ob}$      | $V_{CB} = (-)30V, f = 1MHz$      |         | 2.6   |         | pF      |
|                              |               |                                  |         | (3.1) |         | pF      |
| Reverse Transfer Capacitance | $C_{re}$      | $V_{CB} = (-)30V, f = 1MHz$      |         | 1.8   |         | pF      |
|                              |               |                                  |         | (2.3) |         | pF      |

※ : The 2SA1353/2SC3417 are classified by 10mA  $h_{FE}$  as follows :

|    |   |    |    |   |     |     |   |     |     |   |     |
|----|---|----|----|---|-----|-----|---|-----|-----|---|-----|
| 40 | C | 80 | 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|----|----|---|-----|-----|---|-----|-----|---|-----|

**Package Dimensions 2009B**

(unit : mm)



JEDEC: TO-126

1 : Emitter  
2 : Collector  
3 : Base

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