

# DATA SHEET

|                  |                 |
|------------------|-----------------|
| Part No.         | AN80T53         |
| Package Code No. | HZIP007-P-0750A |

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# AN80T53

## Multi voltage regulator IC

### ■ Features

- 4 outputs voltage regulator
- Peak current protection circuit
- Thermal protection circuit
- Load short protection circuit

### ■ Applications

- For power supply

### ■ Package

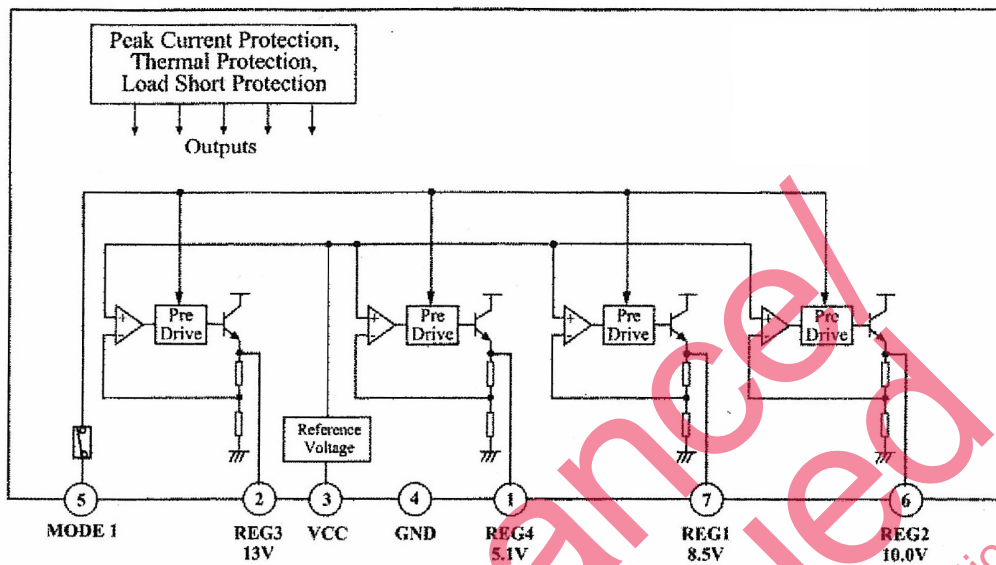
- TO-2207 pins plastic package (power type with fin)

### ■ Type

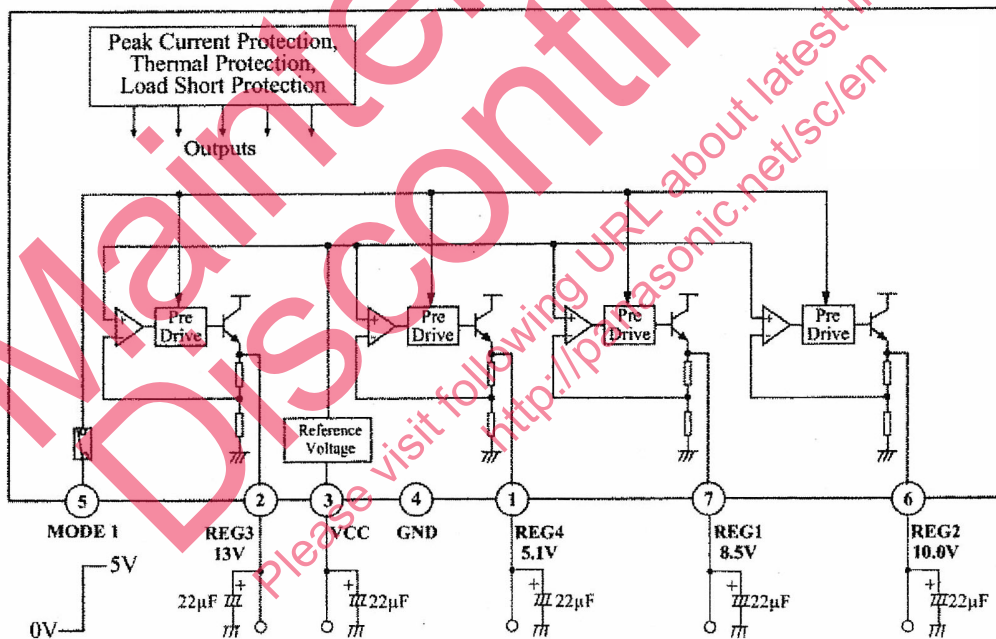
- Silicon monolithic bipolar IC

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### ■ Block Diagram



### ■ Application Circuit Example



|             |                             |
|-------------|-----------------------------|
| MODE 1 = 0V | REG1, REG2, REG3 & REG4 OFF |
| MODE 1 = 5V | REG1, REG2, REG3 & REG4 ON  |

- Note )
1. To prevent oscillation at each output, make sure to connect a capacitor having a capacitance of 22 μF or greater between GND and each of the REG1 (pin 5), REG2 (pin 7), REG3 (pin 3) and V<sub>CC</sub> (pin 6) pins. We recommend using a tantalum electrolytic capacitor whose capacitance is unsusceptible to temperature.
  2. When supplied a V<sub>CC</sub> of 21 V or greater, IC may be damaged if REG2 or REG3 outputs are shorted to GND.
  3. When supplied a V<sub>CC</sub> of 21 V or greater, IC may be damaged if REG2 or REG3 outputs are load short.

### ■ Pin Descriptions

| Pin No. | Pin name    | Description   |
|---------|-------------|---|
| 1       | REG4 Output | 5.1 V power supply with a minimum peak output current of 1 200 mA     |
| 2       | REG3 Output | 13 V power supply with a minimum peak output current of 1 350 mA      |
| 3       | VCC         | Connected to power supply.  |
| 4       | GND         | Connected to the IC substrate.  |
| 5       | MODE1       | REG1, REG2, REG3 and REG4 outputs are turned ON when this pin is 5 V. |
| 6       | REG2 Output | 10 V power supply with a minimum peak output current of 800 mA        |
| 7       | REG1 Output | 8.5 V power supply with a minimum peak output current of 700 mA       |

### ■ Absolute Maximum Ratings

| A No. | Parameter                       | Symbol    | Rating                                   | Unit             | Note |
|-------|---------------------------------|-----------|--|------------------|------|
| 1     | Storage temperature             | $T_{stg}$ | -55 to +150                              | °C               | *1   |
| 2     | Operating ambient temperature   | $T_{opr}$ | -30 to +85                               | °C               | *1   |
| 3     | Operating ambient pressure      | $P_{opr}$ | $1.013 \times 10^5 \pm 0.61 \times 10^5$ | Pa               |      |
| 4     | Operating constant acceleration | $G_{opr}$ | 9 810                                    | m/S <sup>2</sup> |      |
| 5     | Operating shock                 | $S_{opr}$ | 4 900                                    | m/S <sup>2</sup> |      |
| 6     | Power supply voltage            | $V_{CC}$  | 30.0                                     | V                |      |
| 7     | Power supply current            | $I_{CC}$  | 3.0                                      | A                | *2   |
| 8     | Power dissipation               | $P_D$     | 13                                       | W                | *3   |

Note ) \*1: Except these items, all other measurements are taken at  $T_a = 25^\circ\text{C}$ .

\*2: Over current limiting circuit built-in.

\*3:  $T_a = 85^\circ\text{C}$  infinite heat sink.

### ■ Operating Supply Voltage Range

| Parameter                      | Symbol   | Range        | Unit | Note |
|--------------------------------|----------|--------------|------|------|
| Operating supply voltage range | $V_{CC}$ | 15.0 to 30.0 | V    | *    |

Note ) \*: Minimum peak output current is not guaranteed at  $V_{CC} = 24\text{ V}$  to  $30\text{ V}$

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