

# PQ3DF53

3.3V Output, High Output Current (5A) Type Low Power-loss Voltage Regulator

## ■ Features

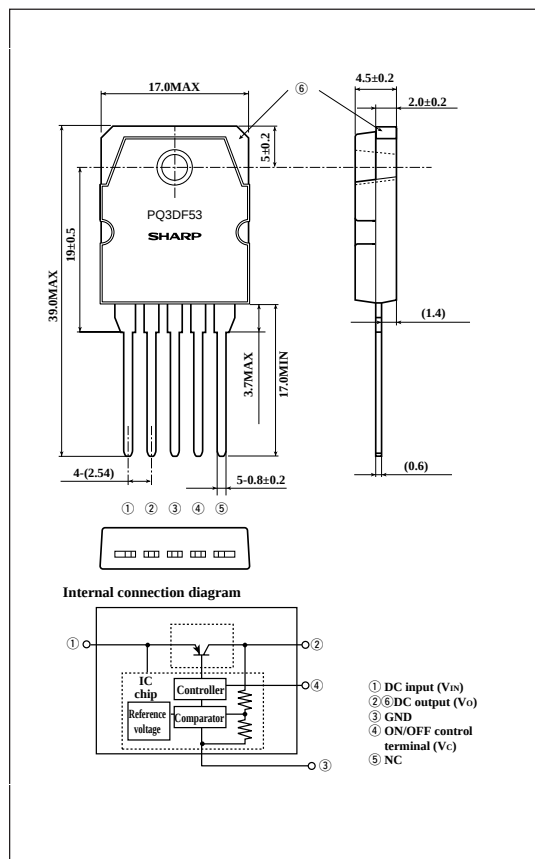
- TO-3P package
- Low power-loss (Dropout voltage : MAX. 0.5V at  $I_o=5A$ )
- 3.3V output
- High output current (5A)
- High-precision output voltage type  
(Output voltage precision :  $\pm 2.5\%$ )
- Built-in ON/OFF control function
- Built-in overcurrent protection, overheat protection function

## ■ Applications

- Power supplies for various electronic equipment such as personal computers

## ■ Outline Dimensions

(Unit : mm)



## ■ Absolute Maximum Ratings

(T<sub>a</sub>=25°C)

| Parameter                                   | Symbol           | Rating        | Unit |
|---------------------------------------------|------------------|---------------|------|
| *1 Input voltage                            | V <sub>IN</sub>  | 10            | V    |
| *1 ON/OFF control terminal voltage          | V <sub>C</sub>   | 10            | V    |
| Output current                              | I <sub>O</sub>   | 5.0           | A    |
| Power dissipation (No heat sink)            | P <sub>D1</sub>  | 2.2           | W    |
| Power dissipation (With infinite heat sink) | P <sub>D2</sub>  | 60            | W    |
| *2 Junction temperature                     | T <sub>j</sub>   | 150           | °C   |
| Operating temperature                       | T <sub>opr</sub> | -20 to + 80   | °C   |
| Storage temperature                         | T <sub>stg</sub> | -40 to +150   | °C   |
| Soldering temperature                       | T <sub>sol</sub> | 260 (For 10s) | °C   |

\*1 All are open except GND and applicable terminals.

\*2 Overheat protection may operate at 125<T<sub>j</sub><150°C.

· Please refer to the chapter "Handling Precautions".

**SHARP**

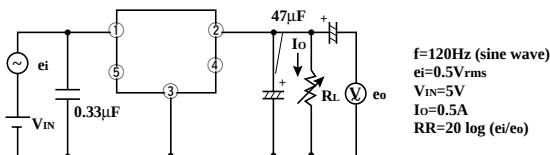
"In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest version of the device specification sheets before using any SHARP's device."

(Unless otherwise specified, conditions shall be  $V_{IN}=5V$ ,  $I_O=2.5A$   $T_a=25^{\circ}C$ )

**\*3 Input voltage shall be the value when output voltage is 95% in comparison with the initial value.**

**\*4 In case of opening control terminal ④, output voltage turns on.**

**Fig.2 Test Circuit for Ripple Rejection**



**Fig.4 Overcurrent Protection Characteristics (Typical Value)**

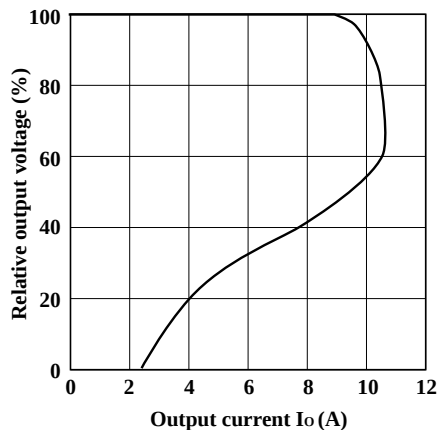


Fig.5 Output Voltage Deviation vs. Junction Temperature

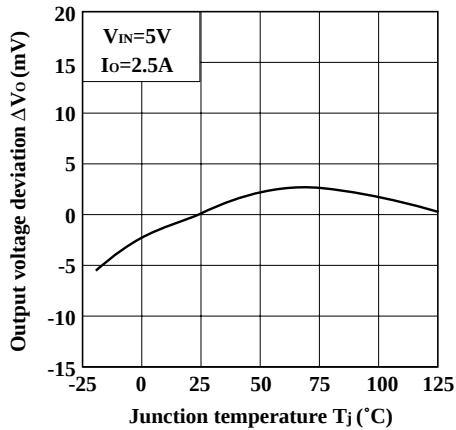


Fig.6 Output Voltage vs. Input Voltage

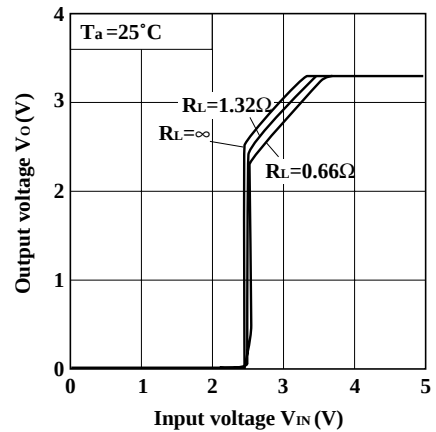


Fig.7 Circuit Operating Current vs. Input Voltage

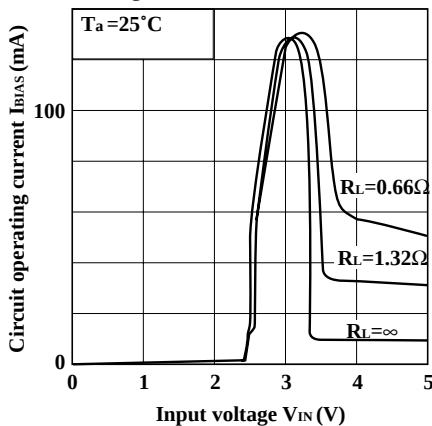


Fig.8 Dropout Voltage vs. Junction Temperature

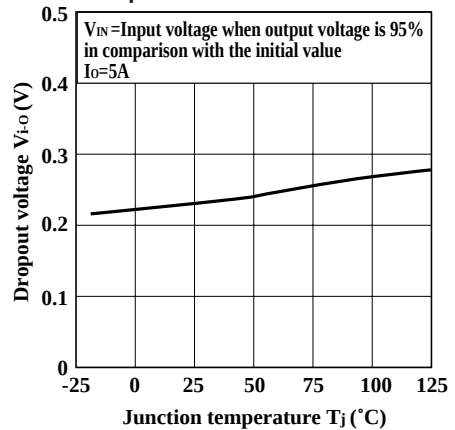


Fig.9 Quiescent Current vs. Junction Temperature

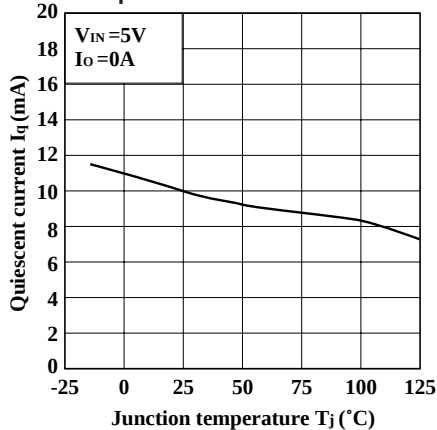


Fig.10 Ripple Rejection vs. Input Ripple Frequency

