

TOSHIBA

Toshiba TB6605FTG Reference Manual

Mcd evaluation board for pump motor control

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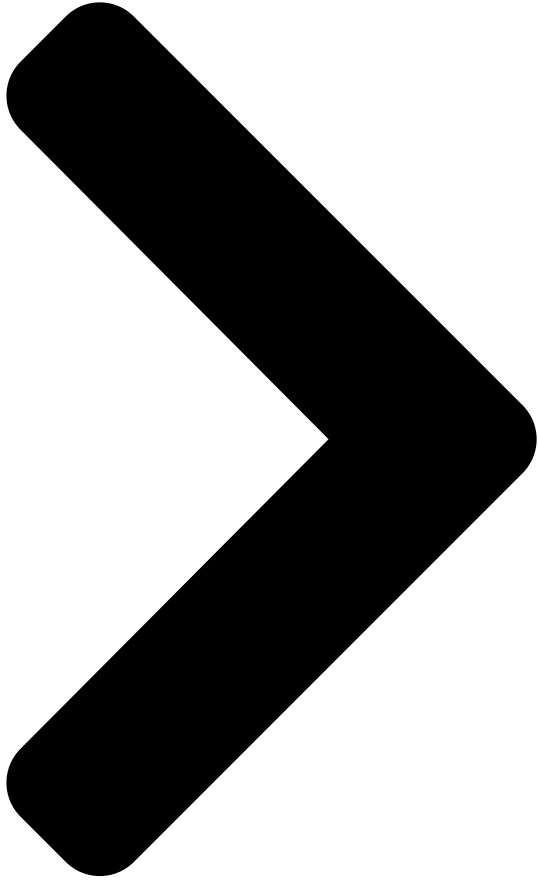
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Related Manuals for Toshiba TB6605FTG

[Engine Toshiba TB6605FTG Reference Manual](#)

Motor control closed-loop system (31 pages)

[Motherboard Toshiba TMPM330 User Manual](#)

(31 pages)

[Motherboard Toshiba MCU FLASH WRITER Instruction Manual](#)

(5 pages)

[Motherboard Toshiba TCKE8 Series Instruction Manual](#)

(10 pages)

[Motherboard Toshiba SAPPHIRE-67CFSG User Manual](#)

Bluetooth ic evaluation board (14 pages)

Summary of Contents for Toshiba TB6605FTG

[Page 1](#) MCD Evaluation Board for Pump Motor Control Reference Guide...

[Page 2](#) MCD Evaluation Board for Pump Motor Control Reference Guide Overview TB6605FTG speed close loop reference module is a motor controller evaluation kit, for 10V~28V power supply motor driver. The reference module consists of two parts: an driver board and a motor.

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[Page 4: Feature](#)

1. Support 3 hall sensor BLDC motor driver 2. Power support: 10V~ 28V DC, Current 0.5A~2A (limited by Motor Spec) 3. Motor speed control by variable resistor, Brake, CW/CCW function 4. Anti-reverse power supply function available © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 5: Specifications](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 2. Specifications: • Control IC :TB6605FTG, sine wave BLDC motor controller • Power supply□ 10V~28V (control board power supply) • Motor Spec□ 10V~28V/0.5A~2A (see detail of Motor Spec) • Motor driver output with MosFet: - N ch + N ch MosFet : TSB TK20P04M X 6pcs •...

[Page 6: Block Diagram](#)

3. Block Diagram Speed closed-loop control circuit Target speed voltage Op-Amp: TC75S51F Current speed voltage Output PWM duty control voltage Lead Rotation angle speed Converter control signal pre- Driver Sine wave controller MCD:TB6605FTG © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 7: R/M Layout](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 4. R/M layout (PCB dimension: length 100mm, Width:88.9mm) Anti-reverse N+ N MOS Amplifier for Close loop © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 8: R/M Connection And Control I/F](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 5. R/M connection and Control I/F START BRAKE CW/CCW Speed © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 9: Usage](#)

Stop motor rotation, and finished the operation check If an Error Occurs 1, Power supply LED no "lighting", check power supply cable and voltage. 2, Motor no rotation, check motor connection, Control switch set. © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 10: Power Supply](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 6.1 Power supply TB6605FTG close loop R/M support power supply: 10V~28V, and 2A current limited. TB6605FTG close loop R/M not include Power supply, need user prepare by yourself. Power supply show for your information introduce 1.

[Page 11: Motor Connect](#)

Motor dimension Motor cable *** attention: 1, Motor U/V/W line, should be connect with U/V/W on R/M. 2, Do not mix hall U, Hall V, Hall W line and motor U/V/W line. © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 12: Motor Control Interface](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 6.3 Motor control interface TB6605FTG close loop R/M control interface include: Start switch for the R/M board working Speed control by variable resistor CW/CCW switch for rotation direction Brake switch for stop motor rotation...

[Page 13: Individual Board Specification](#)

The Dif-in is used to adjust output duty to control motor speed • PWM-in should be connected to GND • Startup control part OUTA START OUTB Motor TB6605FTG OUTC PWM-in Speed control part Dif-in Hall IC signal convertor part © 2017 Toshiba Electronic Devices & Storage Corporation...

[Page 14: Circuit Of Speed Control Part](#)

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[Page 15: Auto Lead Angle Set](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 7.3 Auto Lead angle set 1. For high efficiency, TB6605FTG needs to set a lead angle parameter. 2. Use different motor, need change the parameter of lead angle set. 3. Change the TCR parameter for good lead angle value.

[Page 16: Usage Notes](#)

8. Usage Notes Important points to observe when using TB6605FTG closed-loop R/M are listed below: To ensure that Power supply at range of 10V~28V, and current limited at under 2A due to Motor spec limited. At high current working states, Motor and Control board may have high temperature.

[Page 17: Brushless Motor Parameters](#)

MCD Evaluation Board for Pump Motor Control Reference Guide 9. Brushless motor parameters © 2017 Toshiba Electronic Devices & Storage Corporation...