

FUJITSU Component Thermal Printer FTP-63GMCL153/453 series

Fujitsu 3" high speed (up to 200mm/s) thermal printer mechanism with cutter option

Overview

The FTP-63GMCL series thermal printer driven by 24VDC provides high speed printing (up to 200mm/s) for 3-inch wide paper.

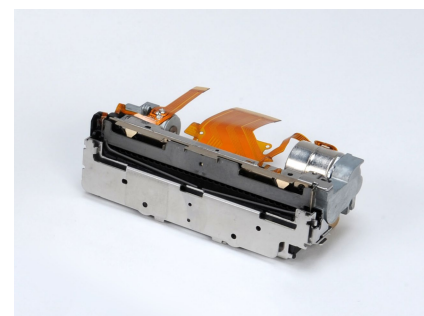
The series is suitable for a variety of applications, such as POS/ECR, kiosk terminals, ticket machines, label printers, banking machines, measuring devices, medical equipment, etc.

Features

- **High-speed printing**
It can print up to 200mm/s (1600 dotlines/s) maximum by using Fujitsu Components' unique head drive control
- **Rear paper insertion mechanism with lock type**
Fujitsu Components' unique platen release mechanism allows for a straight paper path and easy head maintenance
- **Auto Cutter**
Optional ultra-low profile auto cutter (full/partial cut) comes mounted from the factory.
- **Multi-feature diecast frame**
The rugged die-cast frame provides excellent ESD performance, is shock/vibration resistant and the heat-sink allows for continuous printing
- **Compact size**
Depth: 20.4mm, width: 96.2mm, height: 36.3mm (FTP-63GMCL153)
Depth: 32.4mm, width: 100.5mm, height: 45.6mm (FTP-63GMCL453)
- **High resolution**
8 dots/mm head provides clear print
- **Paper width**
80mm
- **RoHS compliant**
- **UL recognized. File number E171434**



FTP-63GMCL153



FTP-63GMCL453

■ Part numbers

| Item | Part Numbers | |
|-----------------------|---------------------|---|
| Printer mechanism | Back insertion | FTP-63GMCL153 |
| Mechanism with cutter | Rear insertion | FTP-63GMCL453 |
| LSI for driving | Under development | |
| Interface board | Serial (RS232C/USB) | FTP-62GDSL001#01 (Japanese font) |
| | Serial (RS232C/USB) | FTP-62GDSL001#02 (Traditional Chinese font) |
| Interface cable | Serial | FTP-62GY302 |
| | USB | FTP-62GY301 |
| Power supply cable | Logic, head, motor | FTP-62GY601 |

■ Specifications

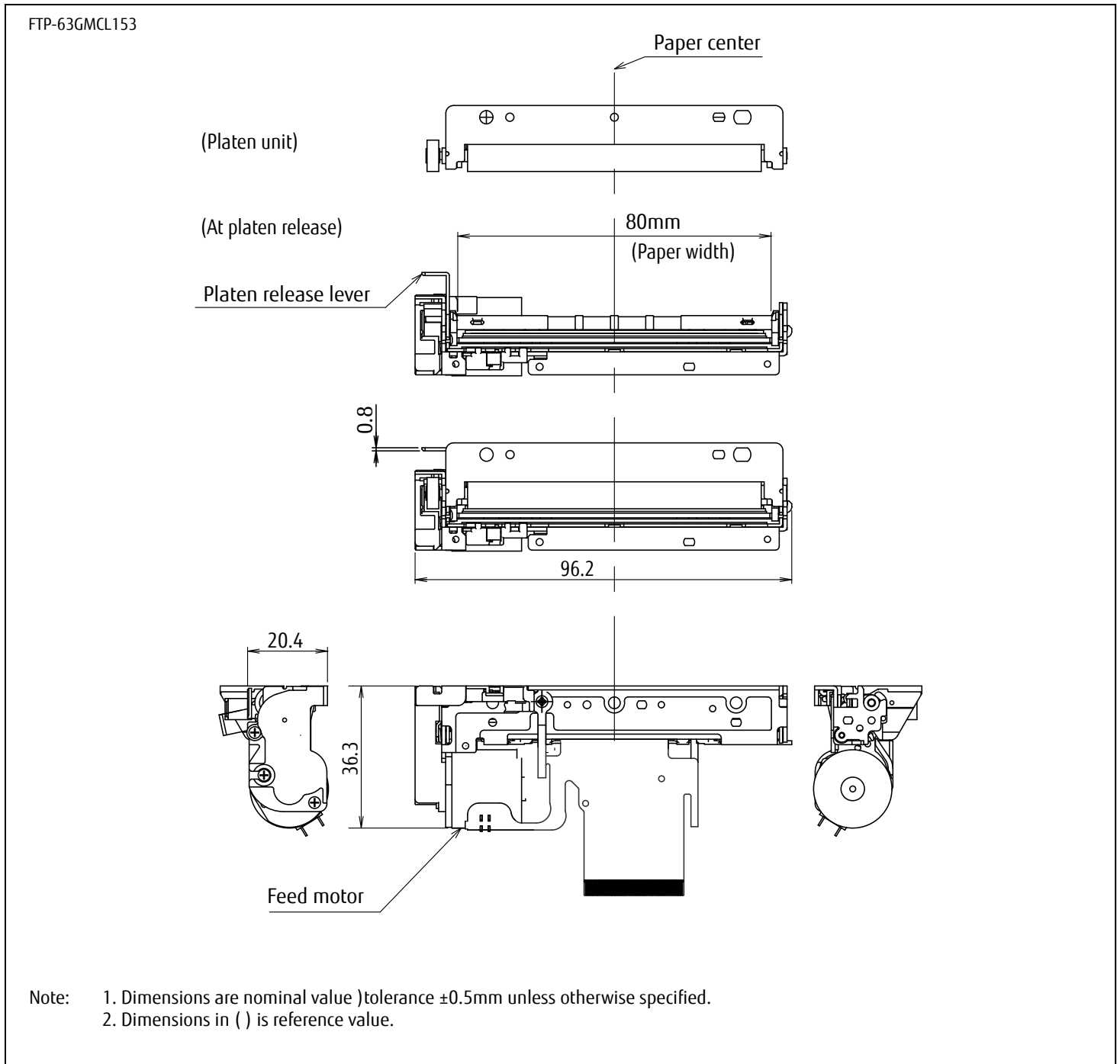
| Item | Specifications | |
|---|--|--|
| Part number | FTP-63GMCL153 | FTP-63GMCL453 |
| Printing method | Thermal sensitive line dot method | |
| Dot structure | 576 dots/lines | |
| Dot pitch (horizontal) | 0.125mm (8 dots/mm) - Dot density | |
| Dot pitch (vertical) | 0.125mm (8 dots/mm) - Line feed pitch | |
| Effective printing area | 72mm | |
| Number of columns | ANK 48 columns/line (12 x 24 x dot font), OCD 24 columns (24 x 40) | |
| Paper width | 80mm +0/-1 | |
| Paper thickness | 60-150 μ m*1 | 60-100 μ m*1 |
| Cutting type | --- | Full or partial |
| Printing speed | 200mm/s (1600 dot lines/s) | |
| Character types | Alphanumeric KANA | 159 types |
| | International and special | 195 types |
| | OCRI | 103 types |
| | OCRIII | 23 types |
| | OCRIV | 103 types |
| | Extended numeric | 12 types |
| | JIS KANJI level 1, 2, non-Kanji Traditional Chinese | JIS KANJI: approx. 6800 13, 503 |
| Character dimensions (W x H), number of characters | 8 x 16 dots, 72 columns, ANK | 24 x 40 dots, 24 columns, OCRI |
| | 12 x 24 dots, 48 columns, ANK | 24 x 48 dots, 24 columns, OCRII |
| | 16 x 16 dots, 36 columns, ANK | 36 x 60 dots, 16 columns, OCRIV |
| | 24 x 24 dots, 24 columns, ANK | 24 x 48 dots, 24 columns, extended numeric |

*1: there may be exceptions

| Item | Specifications | | |
|--|-----------------------------|--|-----------------------|
| Part number | FTP-63GMCL153 | FTP-63GMCL453 | |
| Power | For head | 24VDC \pm 10% 3A (24V, 1500 Ω , +25°C, concurrent applied dot number: 192 dots) | |
| | For printer motor | 24VDC \pm 10% 0.6A maximum | |
| | For logic | 3.3 or 5 VDC \pm 5% 0.1A maximum | |
| Dimensions (WxDxH) | Printer mechanism | 96.2 x 20.4 x 36.3mm | --- |
| | Printer mechanism w/ cutter | --- | 100.5 x 32.6 x 45.6mm |
| | Interface board (DCL/DSL) | 70 x 35mm | |
| Weight | Printer mechanism | 79g | --- |
| | Printer mechanism w/ cutter | --- | 155g |
| | Interface board (DCL/DSL) | 15g | |
| Expected life | Head | Pulse durability: 100 million pulse/dot (using Fujitsu Components' standard driving method) Wear resistance: 100km (at 12.5% print ratio) | |
| | Cutter | --- | 500,000 cuts min. |
| Environmental conditions | Operating temperature | +5°C to +40°C (guarantee) | |
| | Operating humidity | 20 to 85% RH (no condensation) | |
| | Storage temperature | -20°C to +60°C (excluding paper) | |
| | Storage humidity | 5 to 95% RH (no condensation) | |
| Detection functions | Head temperature | By thermistor | |
| | Paper out/Mark detect | By photointerrupter | |
| | Head release | By slide switch | |
| Recommended thermal sensitive paper | High sensitive paper | TF50KS-E45 (Nippon paper) | |
| | Standard paper | TF-60KS-E (Nippon paper) | |
| | | PD150R (Oji paper) | |
| | Medium term paper | TF-60KS-F1 (Nippon paper) | |
| PD170R (Oji paper) P220VBB-1 (Mitsubishi paper) | | | |
| Long term paper | PD160R-N (Oji paper) | | |

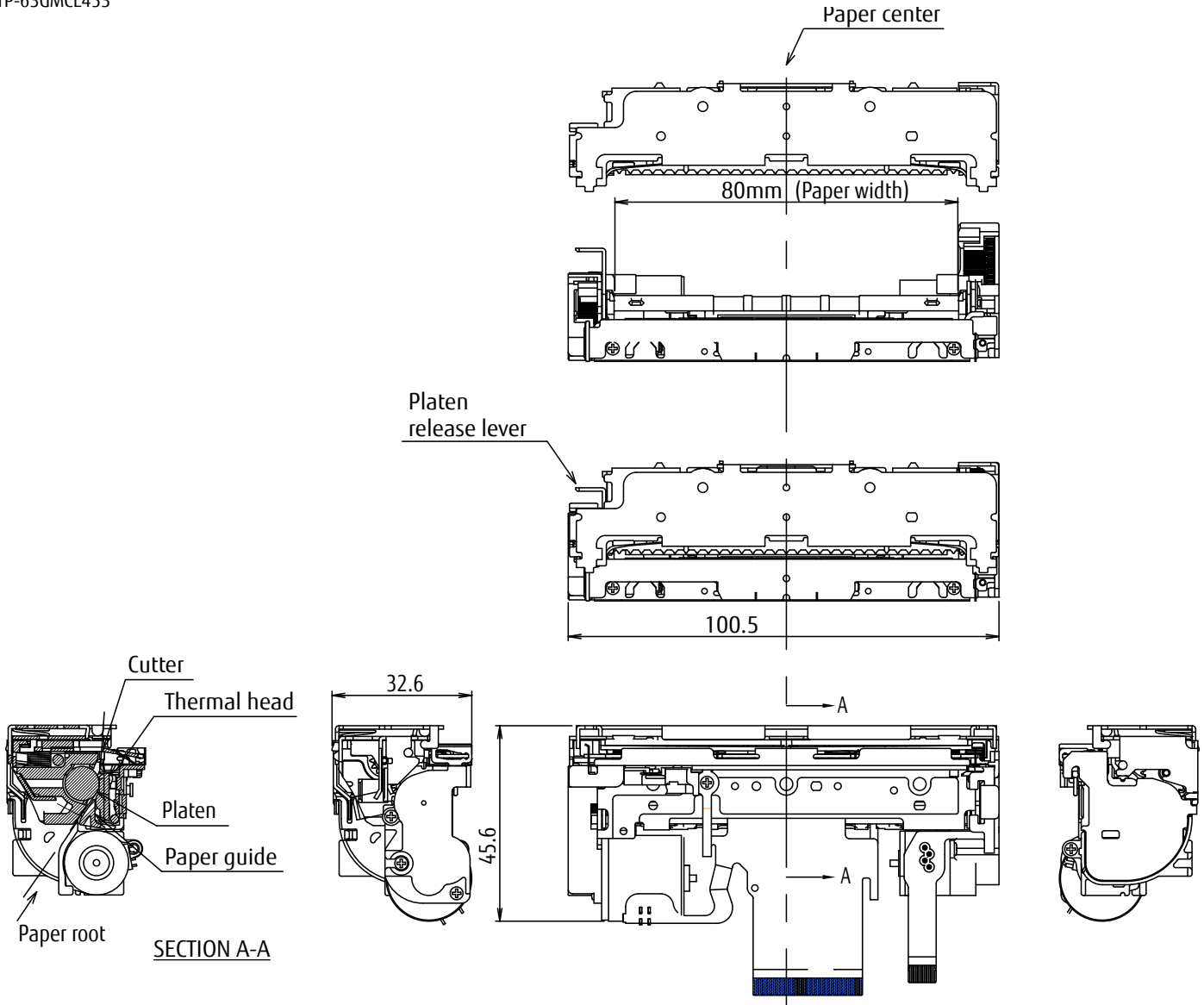
■ Dimensions

- Printer mechanism 3-inch



- Printer mechanism / cutter 3-inch

FTP-63GMCL453



Note: 1. Dimensions are nominal value)tolerance $\pm 0.5\text{mm}$ unless otherwise specified.
2. Dimensions in () is reference value.

■ Connector pin assignments of printer mechanism (FPC)
Recommended connector of head FPC: 54104-5031 (Molex) or equivalent

| No | Signal | Content | I/O |
|----|--------|-------------------------------|-------------|
| 1 | VSEN | Paper sensor power | IN |
| 2 | PHK | Cathode for photo interrupter | OUT |
| 3 | PHE | Emitter for photo interrupter | OUT |
| 4 | N.C. | Not connected | - |
| 5 | VH | Head drive power | IN |
| 6 | VH | Head drive power | IN |
| 7 | VH | Head drive power | IN |
| 8 | VH | Head drive power | IN |
| 9 | DI | Data in | IN |
| 10 | /STB3 | /Strobe3 | IN |
| 11 | /STB4 | /Strobe4 | IN |
| 12 | VDD | Logic power | IN |
| 13 | GND | Head ground | - |
| 14 | GND | Head ground | - |
| 15 | GND | Head ground | - |
| 16 | GND | Head ground | - |
| 17 | GND | Head ground | - |
| 18 | GND | Head ground | - |
| 19 | GND | Head ground | - |
| 20 | GND | Head ground | - |
| 21 | TM | Thermistor | OUT |
| 22 | /STB1 | /Strobe1 | IN |
| 23 | /STB2 | /Strobe2 | IN |
| 24 | /LAT | /Data latch | IN |
| 25 | CLK | Clock | IN |
| 26 | VH | Head drive power | IN |
| 27 | VH | Head drive power | IN |
| 28 | VH | Head drive power | IN |
| 29 | VH | Head drive power | IN |
| 30 | N.C. | Not connected | - |
| 31 | SW | Platen switch release | OUT |
| 32 | SW | Platen switch release | OUT |
| 33 | MT_/A | Excitation signal /A | SINK/SOURCE |
| 34 | MT_/A | Excitation signal /A | SINK/SOURCE |
| 35 | MT_A | Excitation signal A | SINK/SOURCE |
| 36 | MT_A | Excitation signal A | SINK/SOURCE |
| 37 | MT_/B | Excitation signal /B | SINK/SOURCE |
| 38 | MT_/B | Excitation signal /B | SINK/SOURCE |
| 39 | MT_B | Excitation signal B | SINK/SOURCE |
| 40 | MT_B | Excitation signal B | SINK/SOURCE |

■ Connector pin assignments of cutter (FPC)

Recommended connector of cutter motor FPC: 52745-1297 (Molex) or equivalent

| No | Signal | Content | I/O |
|----|--------|-------------------------------|-------------|
| 1 | MT_B | Excitation signal B | SINK/SOURCE |
| 2 | MT_B | Excitation signal B | SINK/SOURCE |
| 3 | MT_/B | Excitation signal /B | SINK/SOURCE |
| 4 | MT_/B | Excitation signal /B | SINK/SOURCE |
| 5 | MT_A | Excitation signal A | SINK/SOURCE |
| 6 | MT_A | Excitation signal A | SINK/SOURCE |
| 7 | MT_/A | Excitation signal /A | SINK/SOURCE |
| 8 | MT_/A | Excitation signal /A | SINK/SOURCE |
| 9 | N.C. | Not connected | - |
| 10 | VSEN | Paper sensor power | IN |
| 11 | PHE | Emitter for photo interrupter | OUT |
| 12 | PHK | Cathode for photo interrupter | OUT |

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