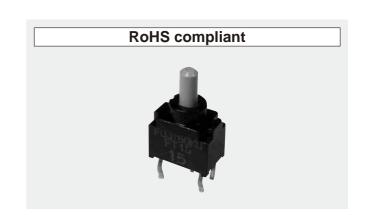


HYPER-MINIATURE TOGGLE SWITCHES

■ FEATURES

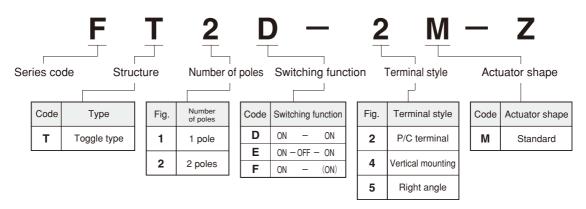
- It is of hyper-compact type. The volumetric ratio is half that of the conventional Series A.
- Immersion cleaning is possible after soldering.
- Terminal mounting is at 0.1-inch pitches.
- Independent detent mechanism provides light feel operability.
- Regarding the contact reliability, a long-term stability is assured by the clip contact.



■ SPECIFICATIONS

| Rating | Max. | 28VDC 0.4VA ma | Χ. | |
|-----------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------|------------------|--|
| | Min. | 1μ A 20mVDC | | |
| Initial contact resistance | | 100mΩmax. | (1.5mA 200 μVAC) | |
| Dielectric strength | | 250VAC 1 minute | | |
| Insulation resistance | | 500MΩmin. | (250VDC) | |
| Electrical life | | 10,000 cycles at max. rating, 50,000 cycles at min. rating.(D,E type) 30,000 cycles at min. rating.(F type) | | |
| Operating temperature range | | -40~+85°C | | |
| Storage temperature range | | -40~+85°C | | |

■ PART NUMBERING



■ TABLE OF PART NUMBERS

| Number of poles | Switching function | P/C terminal | Vertical mounting | Right angle |
|-----------------|--------------------|--------------|-------------------|-------------|
| 1 | ON - ON | FT1D-2M-Z | FT1D-4M-Z | FT1D-5M-Z |
| | ON - OFF - ON | FT1E-2M-Z | FT1E-4M-Z | ☆FT1E-5M-Z |
| | ON - (ON) | ☆FT1F-2M-Z | ★FT1F-4M-Z | FT1F-5M-Z |
| | ON - ON | FT2D-2M-Z | FT2D-4M-Z | FT2D-5M-Z |
| 2 | ON - OFF - ON | FT2E-2M-Z | ★FT2E-4M-Z | ★FT2E-5M-Z |
| | ON - (ON) | ☆FT2F-2M-Z | ★FT2F-4M-Z | ☆FT2F-5M-Z |

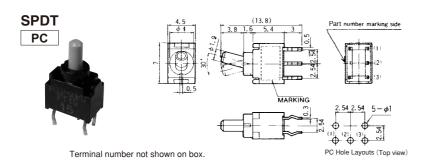
☆ : Quasi-standard items.

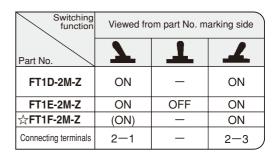
★ : Made-to-order items.

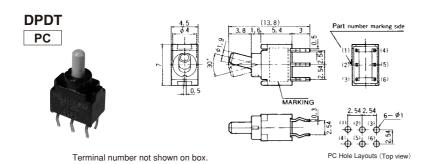
*Please contact us if you can't find your preferable combination in the table of part numbers.

FTHYPER-MINIATURE TOGGLE SWITCHES

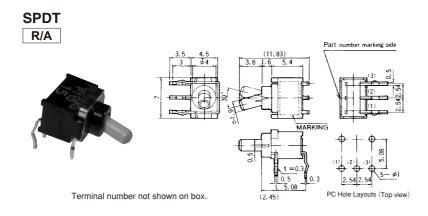
■ OUTLINE DIMENSIONS







| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------------|
| Part No. | 7 | 1 | 4 |
| FT2D-2M-Z | ON | _ | ON |
| FT2E-2M-Z | ON | OFF | ON |
| ☆FT2F-2M-Z | (ON) | _ | ON |
| Connecting terminals | 2-1 5-4 | _ | 2-3 5-6 |
| | | - | _ |



| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------|
| Part No. | 7 | 4 | 1 |
| FT1D-5M-Z | ON | _ | ON |
| ☆FT1E-5M-Z | ON | OFF | ON |
| FT1F-5M-Z | ON | _ | (ON) |
| Connecting terminals | 2-3 | _ | 2-1 |

| DPDT R/A | 3.5 4.5 | (14.02) | Part number marking side |
|-------------|-------------------------|-------------------------------|-----------------------------------------|
| | 3 61 | 3.8 1.6 5.4 | 3 0 0 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 |
| | | MARKING t = 0.3 0.3 | 5.08 2.54 8-\$1 |
| Terminal n | umber not shown on box. | 0.5 5.08 2.54 (2.45) | PC Hole Layouts (Top view) |

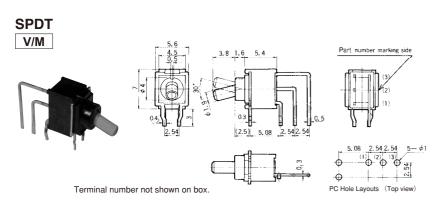
| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------------|
| Part No. | 7 | 1 | 4 |
| FT2D-5M-Z | ON | _ | ON |
| ★FT2E-5M-Z | ON | OFF | ON |
| ☆FT2F-5M-Z | ON | _ | (ON) |
| Connecting terminals | 2-3 5-6 | - | 2-1 5-4 |

(ON) :Momentary.
☆ : Quasi-standard items

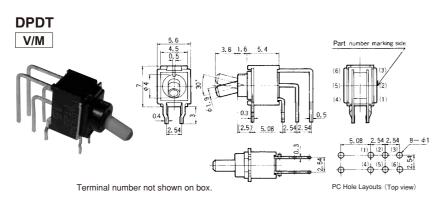
★: Made-to-order items.

FTHYPER-MINIATURE TOGGLE SWITCHES

■ OUTLINE DIMENSIONS



| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|-----|
| Part No. | 7 | 1 | |
| FT1D-4M-Z | ON | _ | ON |
| FT1E-4M-Z | ON | OFF | ON |
| ★FT1F-4M-Z | (ON) | _ | ON |
| Connecting terminals | 2-1 | _ | 2-3 |



| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------------|
| Part No. | 7 | 1 | 1 |
| FT2D-4M-Z | ON | _ | ON |
| ★FT2E-4M-Z | ON | OFF | ON |
| ★FT2F-4M-Z | (ON) | _ | ON |
| Connecting terminals | 2-1 5-4 | _ | 2-3 5-6 |

(ON) : Momentary.★ : Made-to-order items.

■ SOLDERING

(1) Hand soldering

Device : Solder iron. 380 °C Max. 3 sec. Max.

(2) Auto soldering

Device: Wave or dip type 275 °C Max. 6 sec. Max.

Preheat should be within 80-120 °C, 120sec.

(3) When soldering two or more terminals to the common land, use solder resist to solder them independently.

■ FLUX CLEANING

- (1) Solvent: Fluorine or Alcohol type.
- (2) Cleaning shall be made when terminal temperature falls to 90 °C or lower. Or, leave the switch at normal temperature for 5 minutes or longer, before cleaning.
- (3) Do not apply ultrasonic cleaning.

■ PACKAGING SPECIFICATIONS

