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FJ6K01010L

Silicon P-channel MOS FET

For switching

■ Features

- Low drain-source On-state resistance : RDS (on) typ. = 26 mΩ (VGS = -4.5 V)
- Low drive voltage : 1.8 V drive
- Halogen-free / RoHS compliant
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol : T4

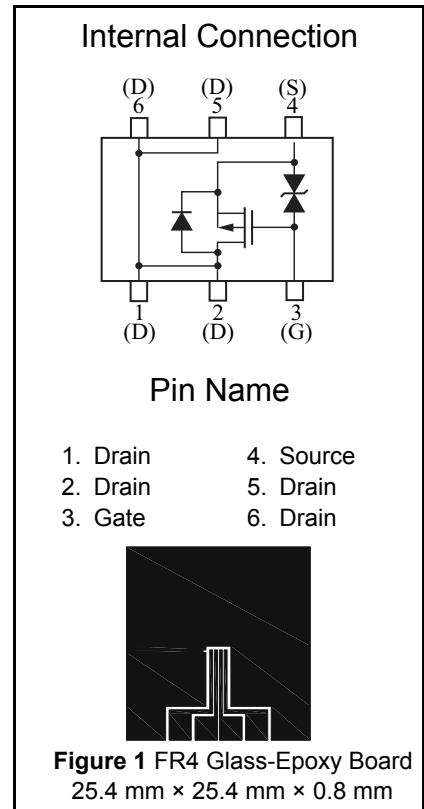
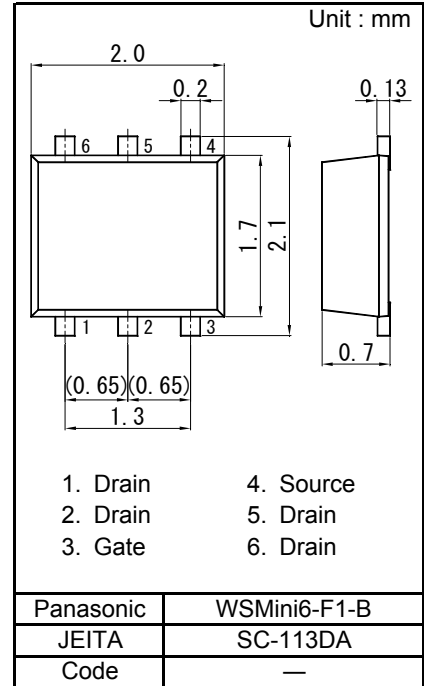
■ Packaging

Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

■ Absolute Maximum Ratings Ta = 25 °C

| Parameter | Symbol | Rating | Unit |
|-------------------------------|--------|-------------|------|
| Drain-source voltage | VDS | -12 | V |
| Gate-source voltage | VGS | ±8 | V |
| Drain current | ID | -4.0 | A |
| Pulse drain current | IDp | -20 | A |
| Total power dissipation *1 | PD | 700 | mW |
| Channel temperature | Tch | 150 | °C |
| Operating ambient temperature | Topr | -40 to + 85 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

Note) *1 Measuring on Glass epoxy board (25.4 x 25.4 x 0.8 mm) (See Figure 1)
 Absolute maximum rating without heat sink for PD is 150 mW



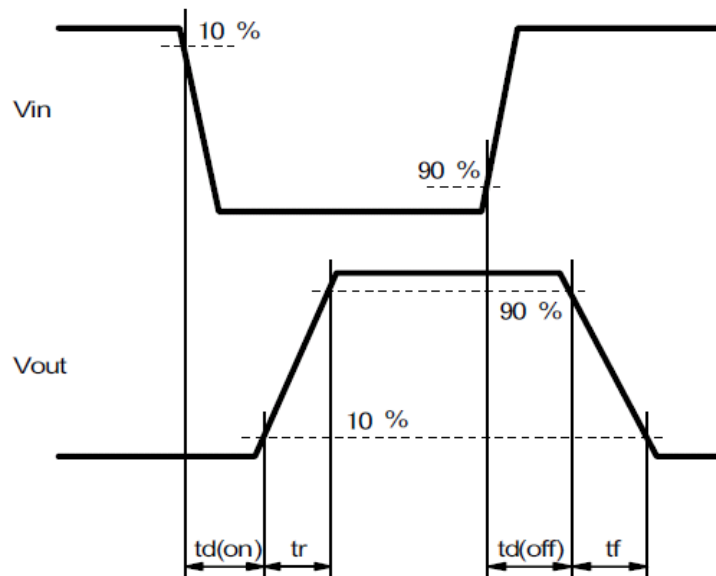
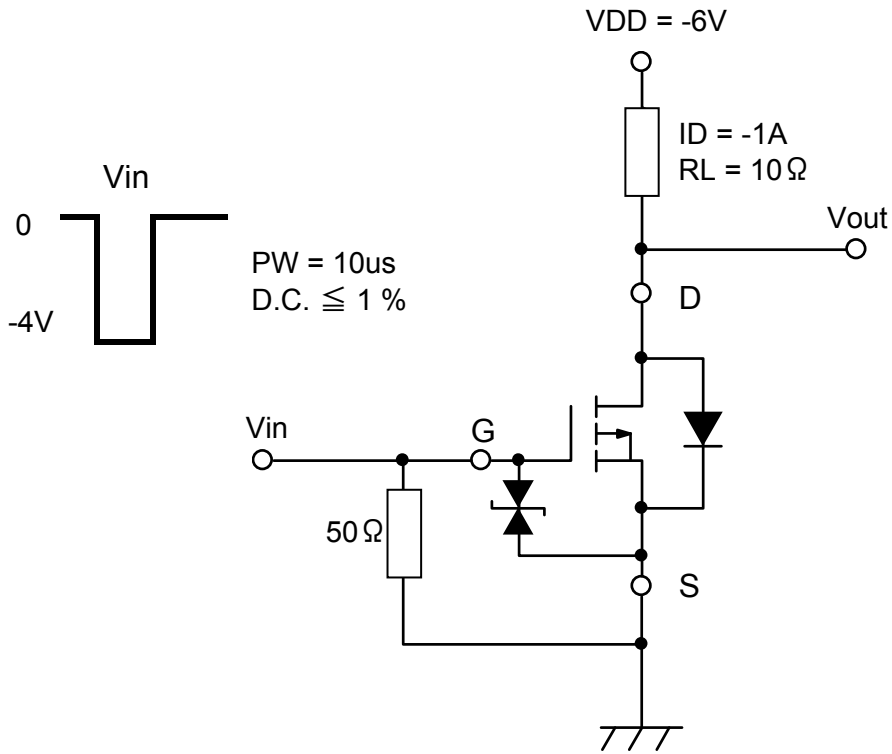
■ Electrical Characteristics Ta = 25 °C ± 3 °C

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|-----------------------------------|----------|---------------------------------|------|-------|------|------|
| Drain-source breakdown voltage | VDSS | ID = -1 mA, VGS = 0 | -12 | | | V |
| Drain-source cutoff current | IDSS | VDS = -10 V, VGS = 0 | | | -1.0 | μA |
| Gate-source cutoff current | IGSS | VGS = ±8 V, VDS = 0 | | | ±10 | μA |
| Gate threshold voltage | Vth | ID = -1.0 mA, VDS = -6.0 V | -0.3 | -0.65 | -1.0 | V |
| Drain-source ON resistance | RDS(on)1 | ID = -1.0 A, VGS = -4.5 V | | 26 | 34 | mΩ |
| | RDS(on)2 | ID = -0.5 A, VGS = -2.5 V | | 30 | 41 | |
| | RDS(on)3 | ID = -0.5 A, VGS = -1.8 V | | 36 | 54 | |
| Forward transfer admittance | Yfs | ID = -1.0 A, VDS = -10 V | 4.0 | | | S |
| Input capacitance | Ciss | VDS = -10 V, VGS = 0, f = 1 MHz | | 1 400 | | pF |
| Output capacitance | Coss | | | 190 | | pF |
| Reverse transfer capacitance | Crss | | | 210 | | pF |
| Turn-on delay time ^{*1} | td(on) | VDD = -6 V, VGS = 0 to -4 V | | 9 | | ns |
| Rise time ^{*1} | tr | ID = -1.0 A | | 40 | | ns |
| Turn-off delay time ^{*1} | td(off) | VDD = -6 V, VGS = -4 to 0 V | | 250 | | ns |
| Fall time ^{*1} | tf | ID = -1.0 A | | 150 | | ns |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

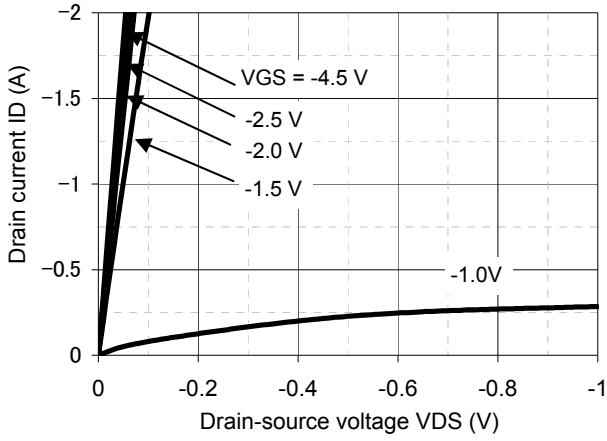
2. *1 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time

*1 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time

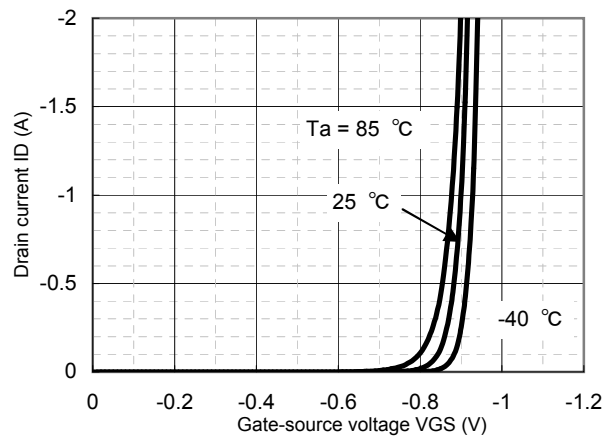


Technical Data (reference)

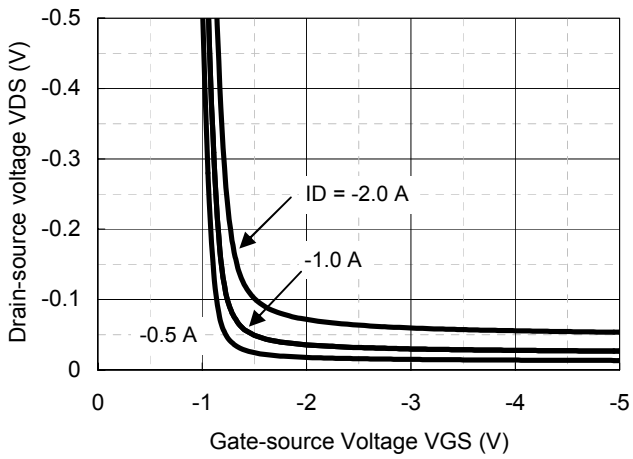
ID - VDS



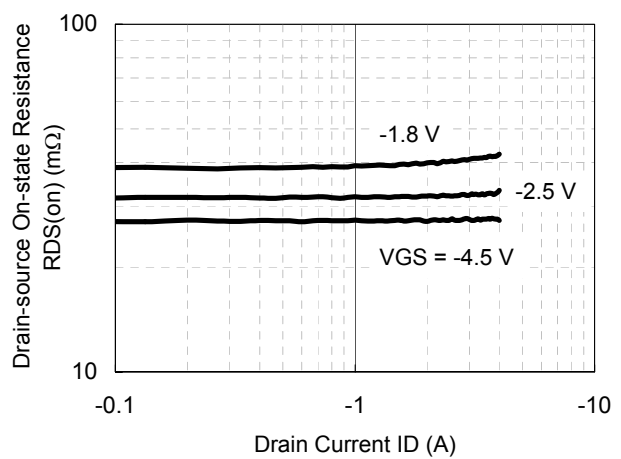
ID - VGS



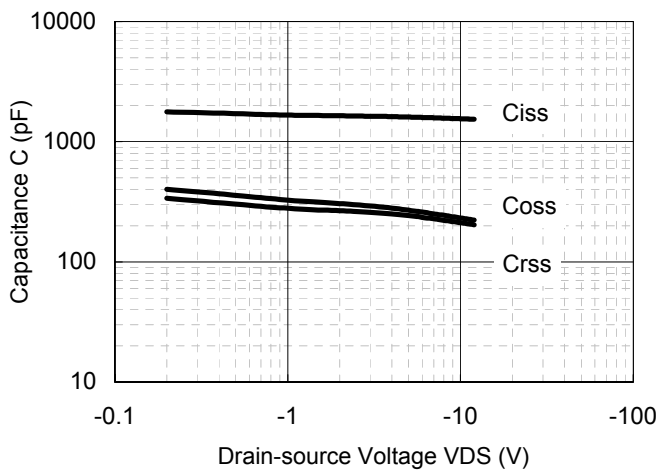
VDS - VGS



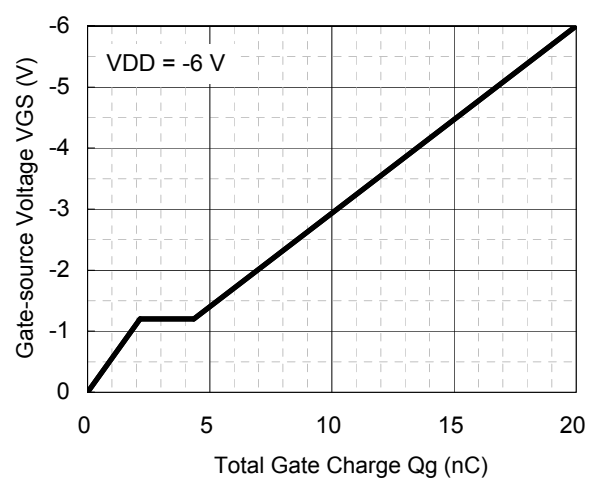
RDS(on) - ID



Capacitance - VDS

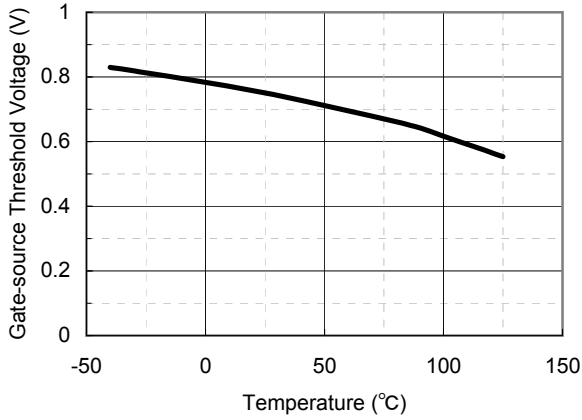


Dynamic Input/Output Characteristics

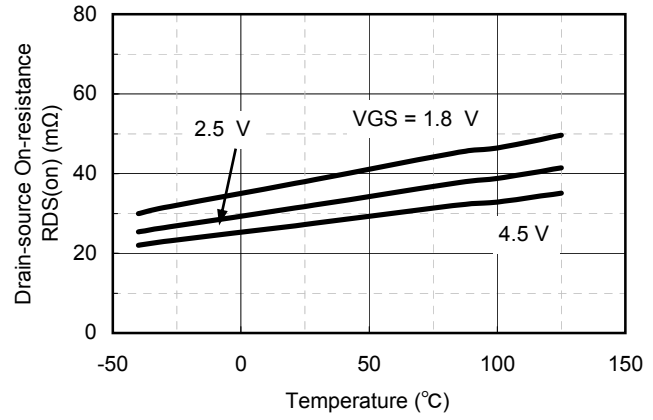


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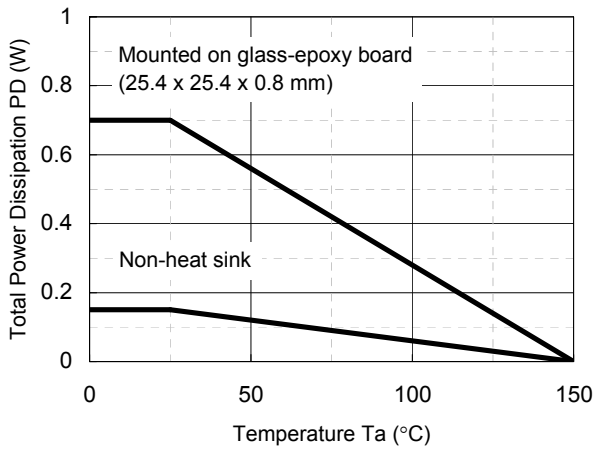
V_{th} - T_a



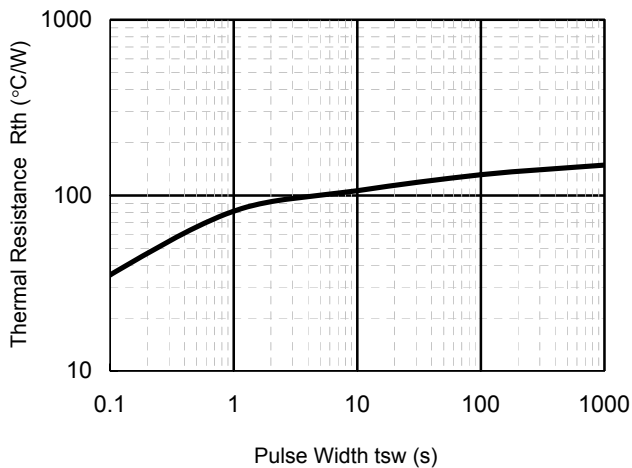
R_{DS(on)} - T_a



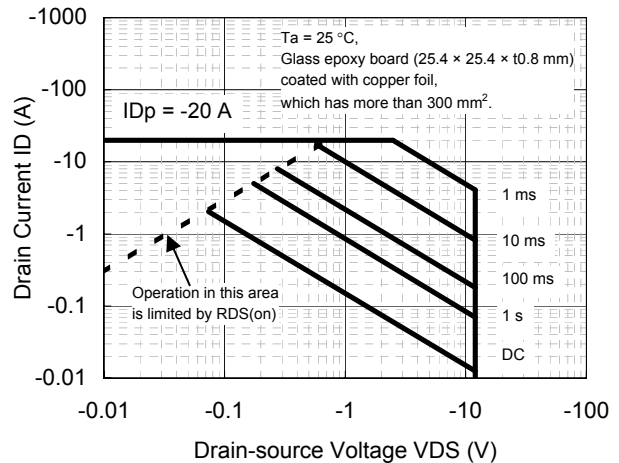
PD - T_a



R_{th} - t_{sw}

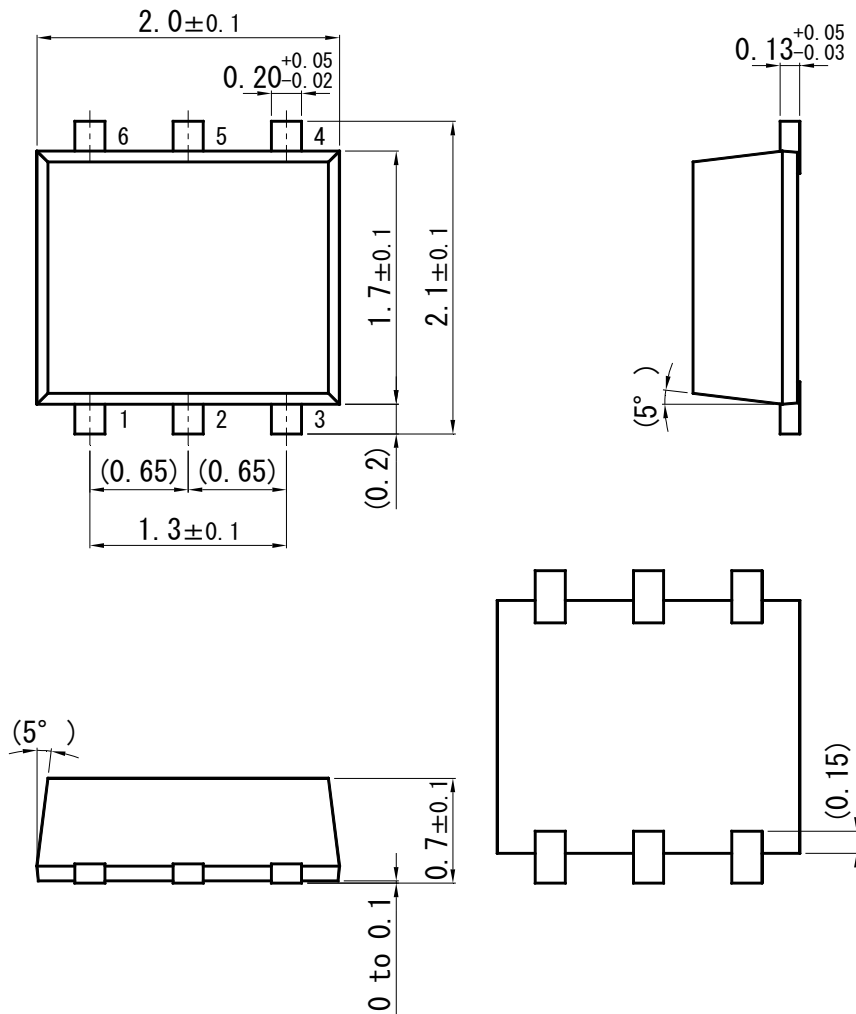


Safe Operating Area

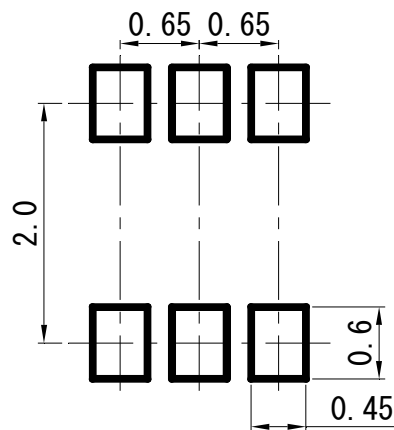


WSMini6-F1-B

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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