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FL6L52060L

Silicon P-channel MOSFET(FET)
Silicon epitaxial planar type(SBD)

For switching
For DC-DC Converter

■ Features

- Low drain-source ON resistance : $R_{DS(on)}$ typ. = 80 m Ω (VGS = -4.0 V)
- Low drive voltage : 1.8 V drive
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol : Y2

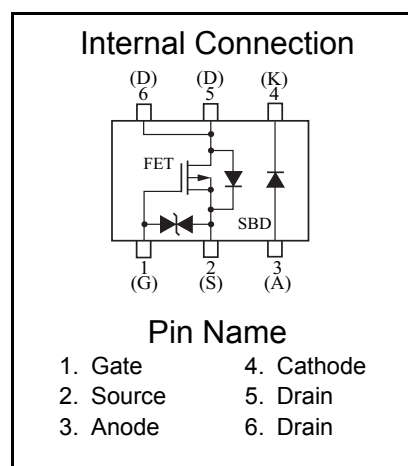
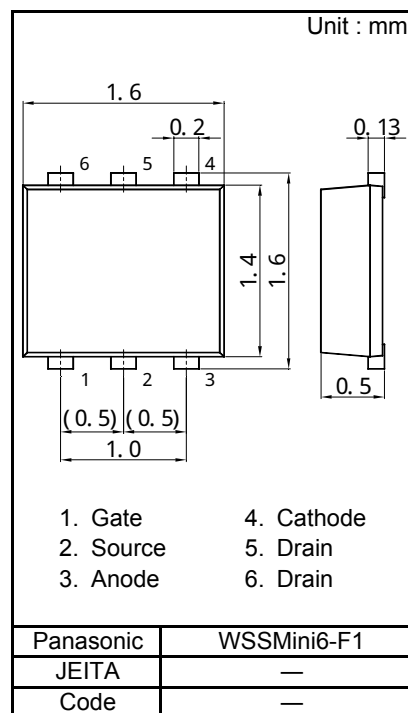
■ Packaging

Embossed type (Thermo-compression sealing): 10 000 pcs / reel (standard)

■ Absolute Maximum Ratings Ta = 25 °C

| 項目 | Symbol | Rating | Unit |
|---------|--|--------|----------------|
| FET | Drain to Source Voltage | VDS | -20 V |
| | Gate to Source Voltage | VGS | ±10 V |
| | Drain current | ID | -2.0 A |
| | Peak drain current | IDp | -8.0 A |
| | Channel temperature | Tch | 150 °C |
| SBD | Reverse voltage | VR | 20 V |
| | Forward current (Average) | IF(AV) | 700 mA |
| Overall | Junction temperature | Tj | 125 °C |
| | Total power dissipation ^{**1} | PD | 540 mW |
| | Operating ambient temperature | Topr | -40 to + 85 °C |
| | Storage temperature | Tstg | -55 to +125 °C |

Note: ^{**1} Measuring on ceramic substrate at 40 mm × 38 mm × 0.2 mm
PD absolute maximum rating without a heat sink: 150 mW



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

FET (P-ch.)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|----------|-------------------------------------|------|-------|------|------|
| Drain-source surrender voltage | VDSS | ID = -1.0 mA, VGS = 0 V | -20 | | | V |
| Drain-source cutoff current | IDSS | VDS = -20 V, VGS = 0 V | | | -1.0 | μA |
| Gate-source cutoff current | IGSS | VGS = ±8 V, VDS = 0 V | | | ±10 | μA |
| Gate threshold voltage | VTH | ID = -1.0 mA, VDS = -10 V | -0.4 | -0.75 | -1.1 | V |
| Drain-source ON resistance *1 | RDS(on)1 | ID = -1.0 A, VGS = -4.0 V | | 80 | 120 | mΩ |
| | RDS(on)2 | ID = -1.0 A, VGS = -2.5 V | | 100 | 170 | |
| | RDS(on)3 | ID = -0.5 A, VGS = -1.8 V | | 140 | 230 | |
| Forward transfer admittance *1 | [Yfs] | ID = -1.0 A, VDS = -10 V, f = 1 kHz | 3.0 | | | S |
| Short-circuit input capacitance (Common source) | Ciss | VDS = -10 V, VGS = 0, f = 1 MHz | | 300 | | pF |
| Short-circuit output capacitance (Common source) | Coss | | | 30 | | |
| Reverse transfer capacitance (Common source) | Crss | | | 35 | | |
| Turn-on delay time *2 | td(on) | VDD = -10 V, VGS = 0 V to -4.0 V | | 6 | | ns |
| Rise time *2 | tr | ID = -1.0 A | | 8 | | |
| Turn-off delay time *2 | td(off) | VDD = -10 V, VGS = -4.0 V to 0 V | | 57 | | ns |
| Fall time *2 | tf | ID = -1.0 A | | 55 | | |

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

2. *1 Pulse measurement

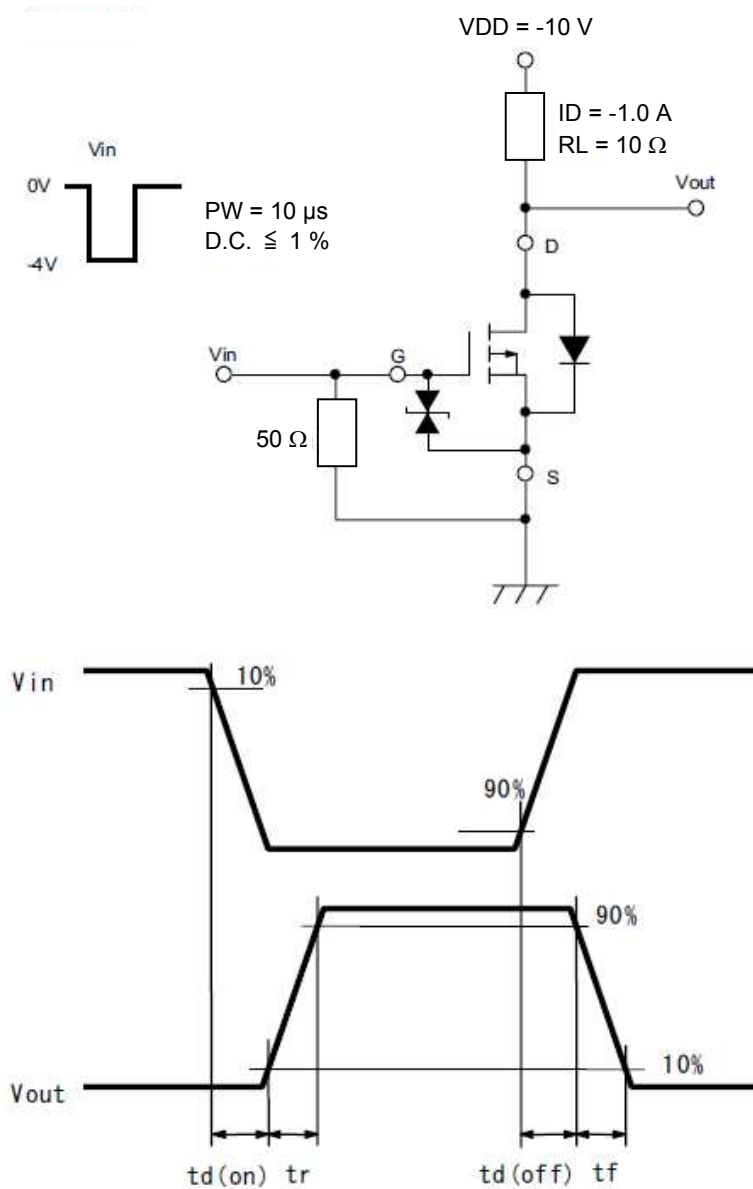
*2 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time

SBD

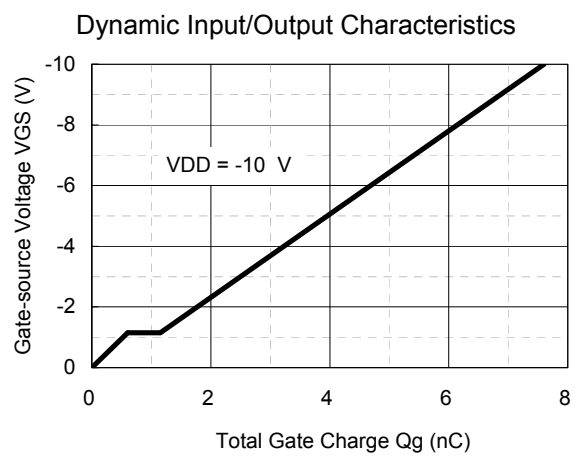
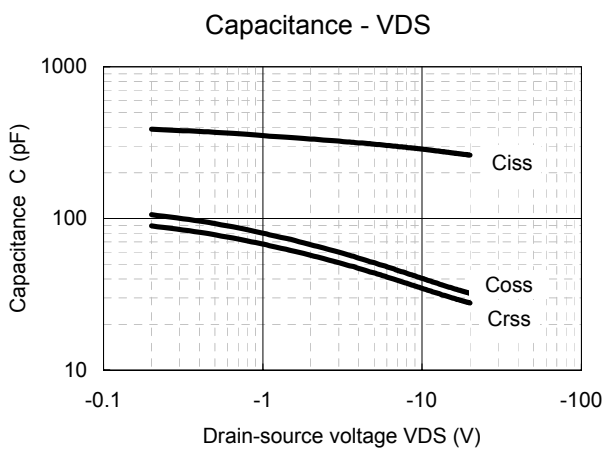
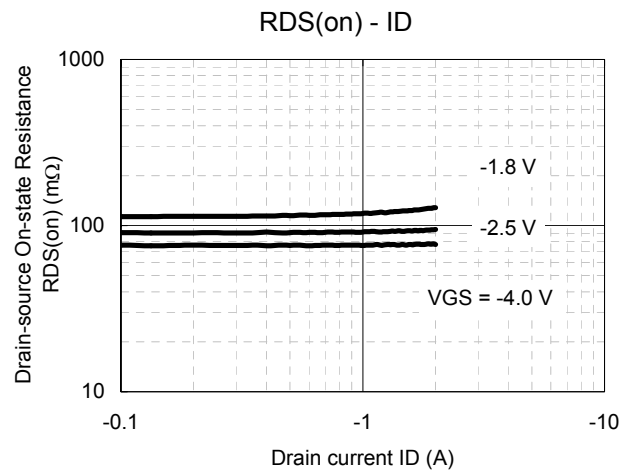
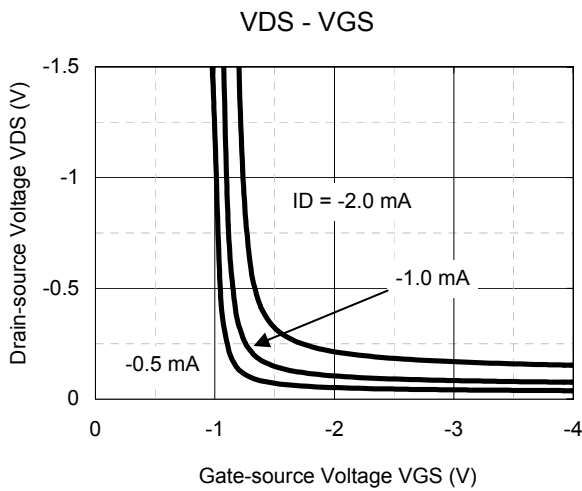
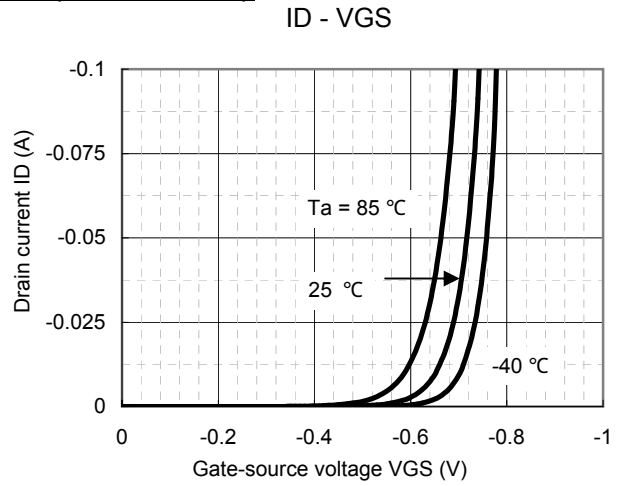
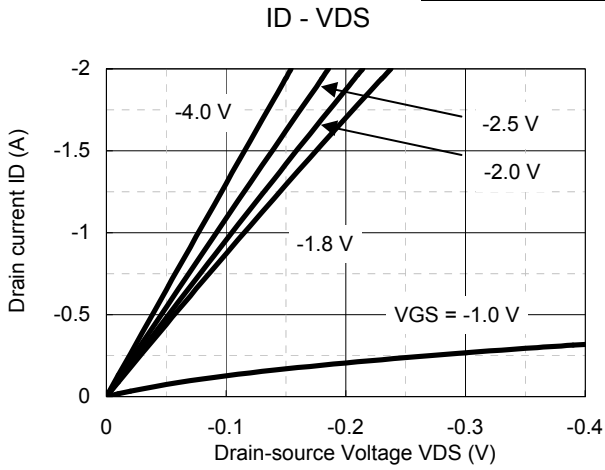
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|-----------------|--------|-------------|-----|-----|------|------|
| Forward voltage | VF1 | IF = 10 mA | | | 0.4 | V |
| | VF2 | IF = 500 mA | | | 0.55 | |
| Reverse current | IR1 | VR = 5 V | | | 1 | μA |
| | IR2 | VR = 10 V | | | 10 | |

Note: Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 Measuring methods for diodes.

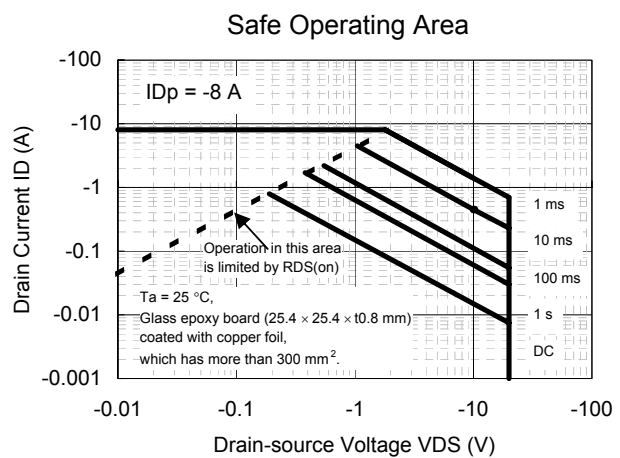
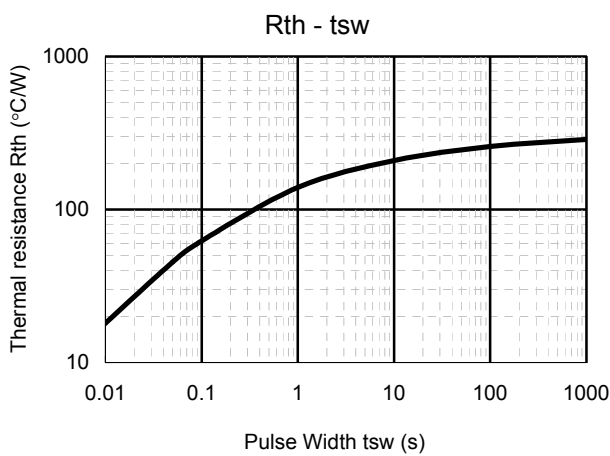
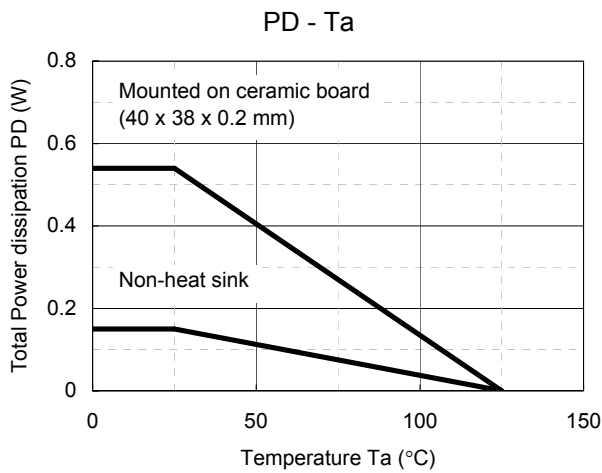
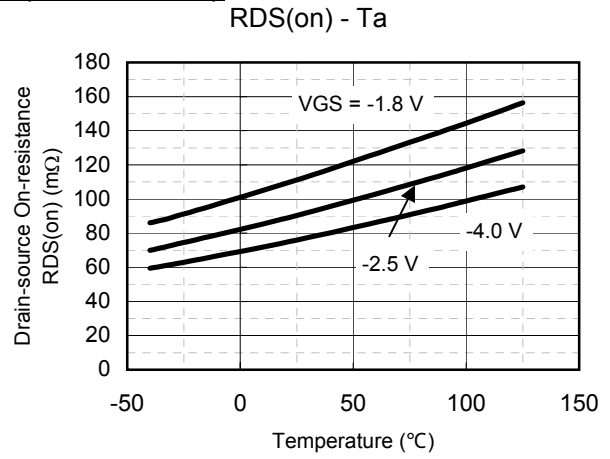
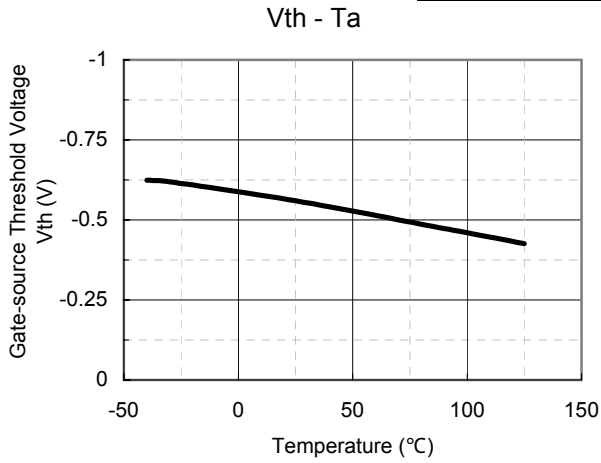
*2 Measurement circuit for Turn-on Delay Time/Rise Time/Turn-off Delay Time/Fall Time



Technical Data (reference)

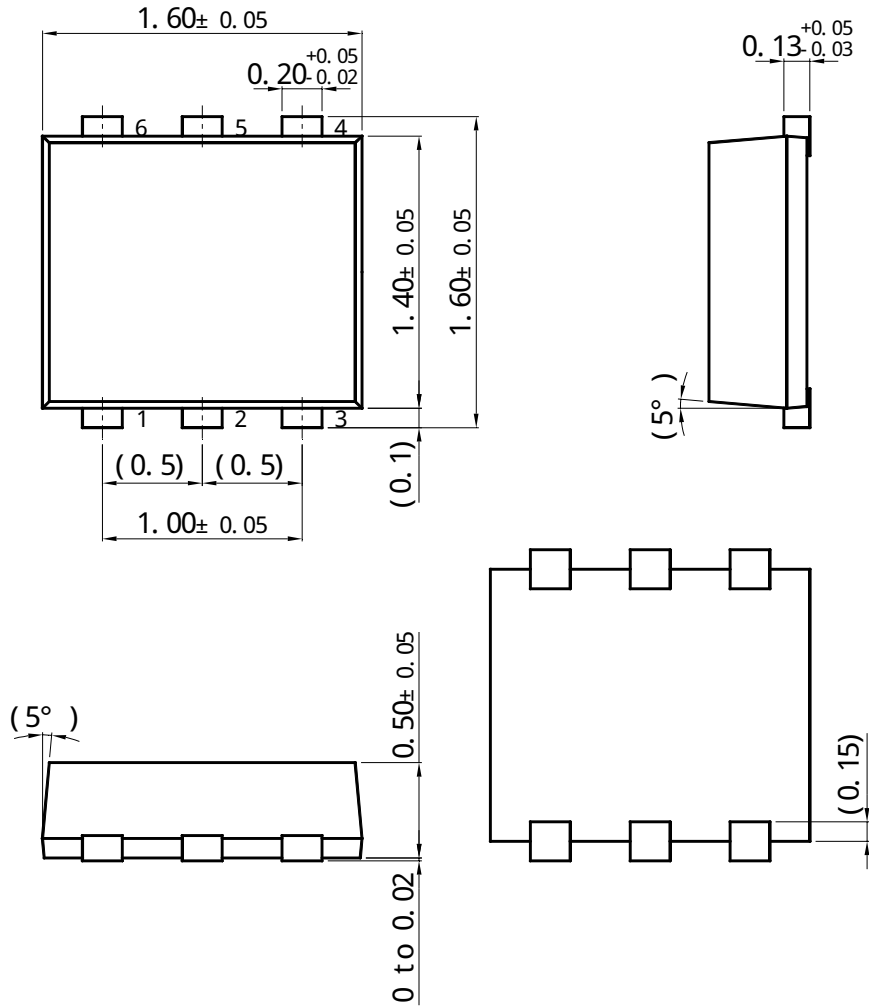


Technical Data (reference)

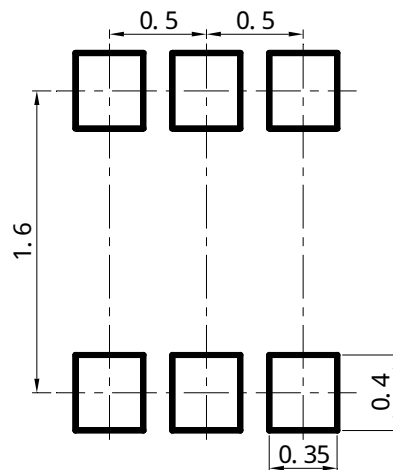


WSSMini6-F1

Unit: mm



■ Land Pattern (Reference) (Unit : mm)



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