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FK3506010L

Silicon N-channel MOS FET

For switching
 FK330601 in SMini3 type package

■ Features

- Low drive voltage : 2.5 V drive
- Halogen-free / RoHS compliant
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

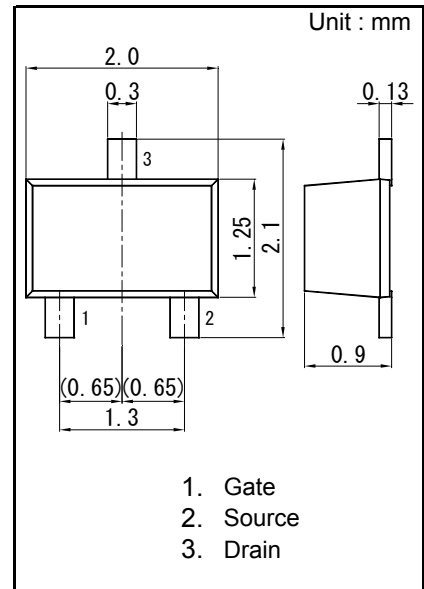
■ Marking Symbol : CV

■ Packaging

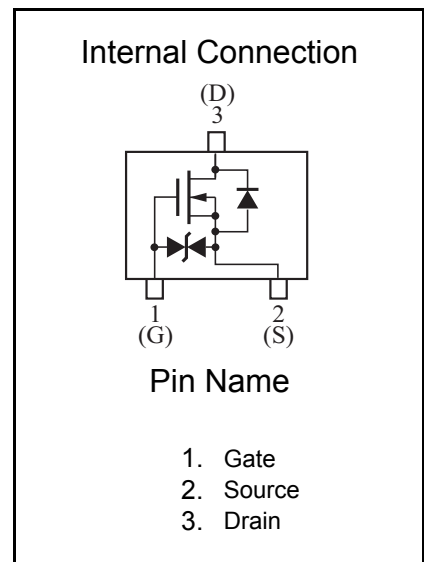
Embossed type (Thermo-compression sealing) : 3 000 pcs / reel (standard)

■ Absolute Maximum Ratings Ta = 25 °C

| Parameter | Symbol | Rating | Unit |
|-------------------------------|--------|-------------|------|
| Drain-source voltage | VDS | 60 | V |
| Gate-source voltage | VGS | ±12 | V |
| Drain current | ID | 100 | mA |
| Pulse drain current | IDp | 200 | mA |
| Total power dissipation | PD | 150 | mW |
| Channel temperature | Tch | 150 | °C |
| Operating ambient temperature | Topr | -40 to +85 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |



| | |
|-----------|-------------|
| Panasonic | SMini3-F2-B |
| JEITA | SC-85 |
| Code | — |

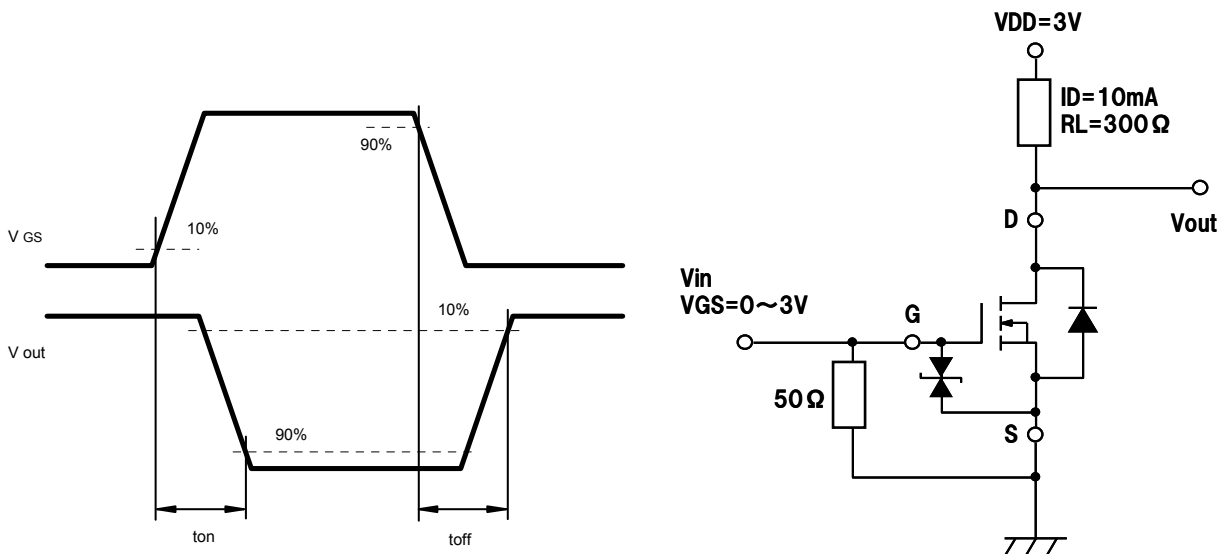




■ Electrical Characteristics Ta = 25 °C ± 3 °C

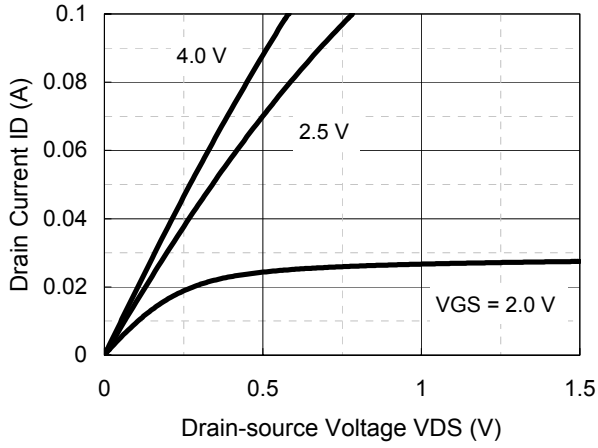
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--------------------------------|---------|---------------------------------------|-----|-----|-----|------|
| Drain-source breakdown voltage | VDSS | ID = 1 mA, VGS = 0 | 60 | | | V |
| Drain-source cutoff current | IDSS | VDS = 60 V, VGS = 0 | | | 1.0 | μA |
| Gate-source cutoff current | IGSS | VGS = ±10 V, VDS = 0 | | | ±10 | μA |
| Gate threshold voltage | VTH | ID = 1.0 μA, VDS = 3.0 V | 0.9 | 1.2 | 1.5 | V |
| Drain-source ON resistance | RDS(on) | ID = 10 mA, VGS = 2.5 V | | 8 | 15 | Ω |
| | | ID = 10 mA, VGS = 4.0 V | | 6 | 12 | Ω |
| Forward transfer admittance | Yfs | ID = 10 mA, VDS = 3.0 V | 20 | 60 | | mS |
| Input capacitance | Ciss | VDS = 3 V, VGS = 0, f = 1 MHz | | 12 | | pF |
| Output capacitance | Coss | | | 7 | | pF |
| Reverse transfer capacitance | Crss | | | 3 | | pF |
| Turn-on time *1 | ton | VDD = 3 V, VGS = 0 to 3 V, ID = 10 mA | | 100 | | ns |
| Turn-off time *1 | toff | VDD = 3 V, VGS = 3 to 0 V, ID = 10 mA | | 100 | | ns |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.
 2. *1 Turn-on and Turn-off test circuit

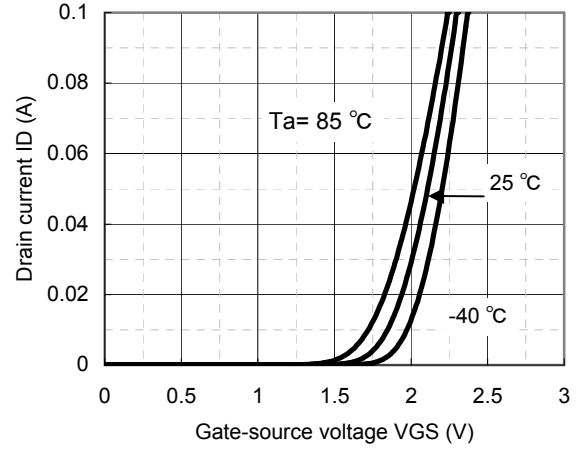




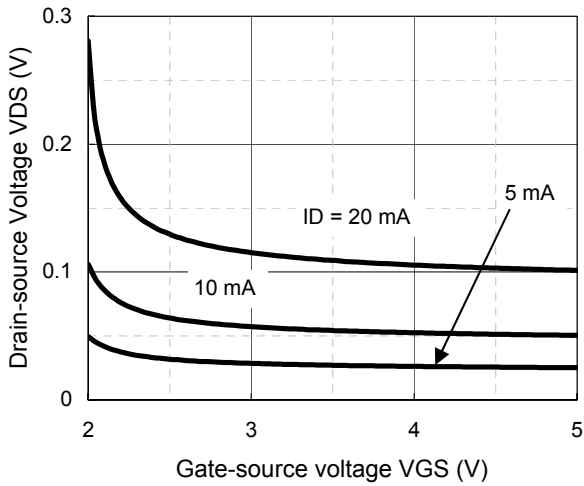
ID - VDS



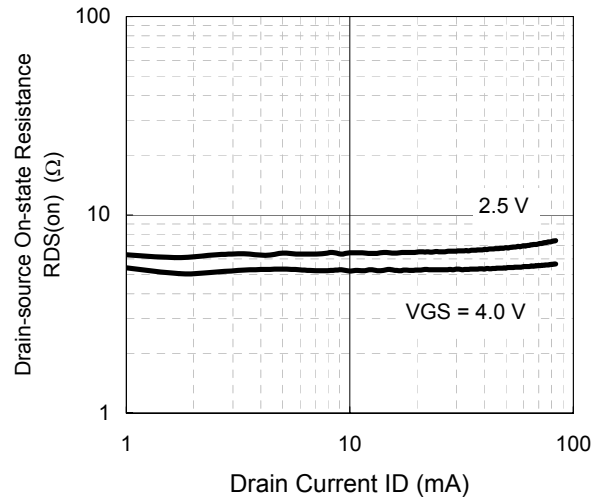
ID - VGS



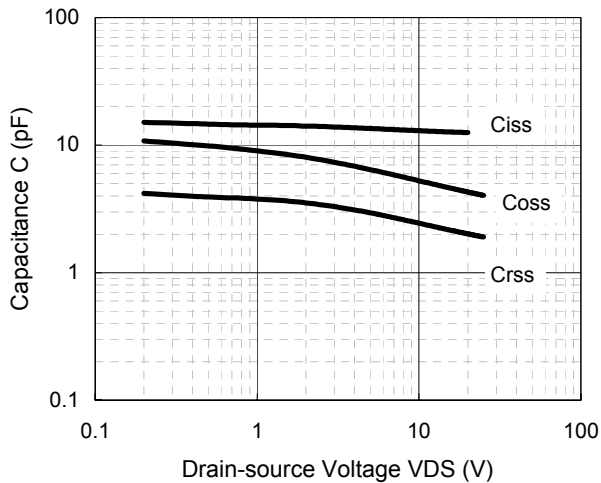
VDS - VGS



RDS(on) - ID

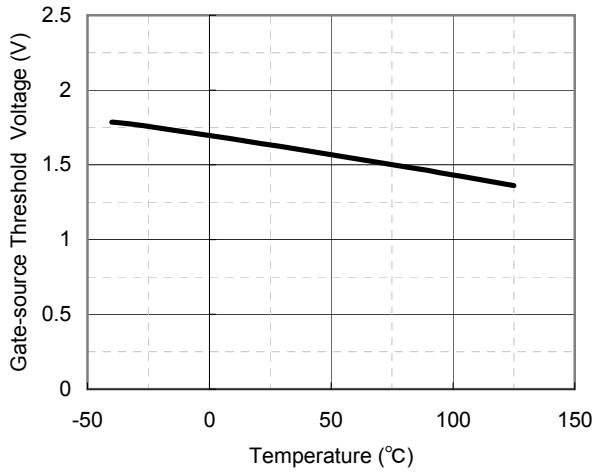


Capacitance - VDS

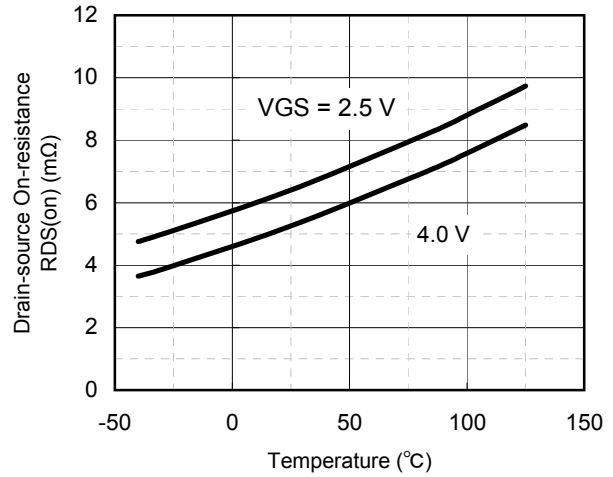




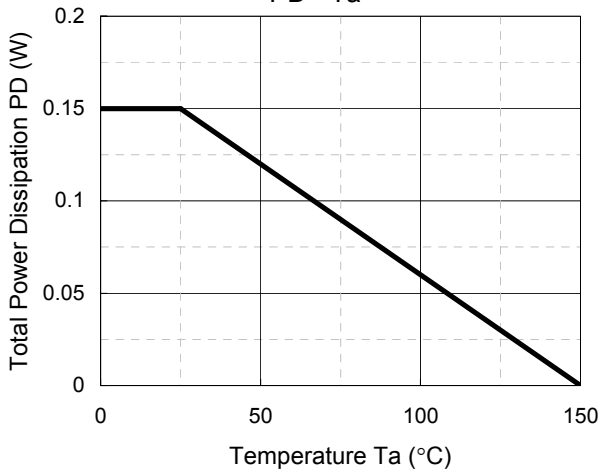
V_{th} - T_a



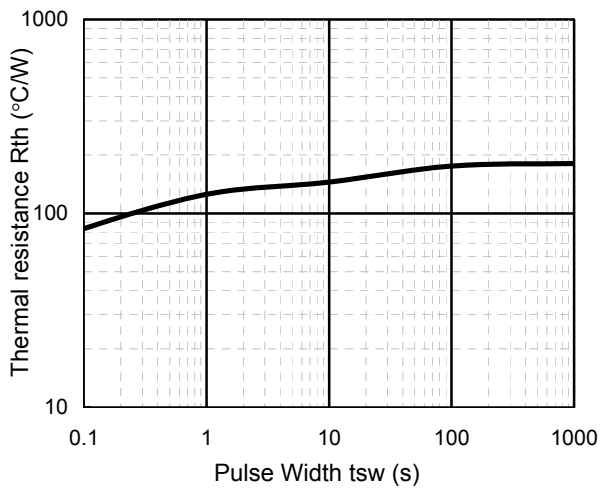
R_{DS(on)} - T_a



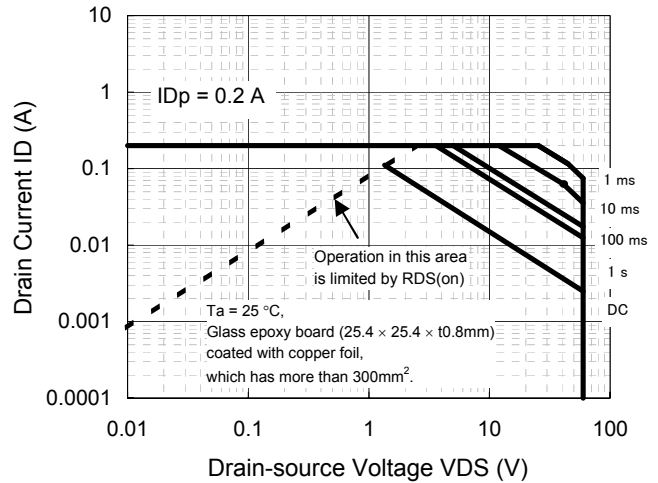
PD - T_a



R_{th} - t_{sw}



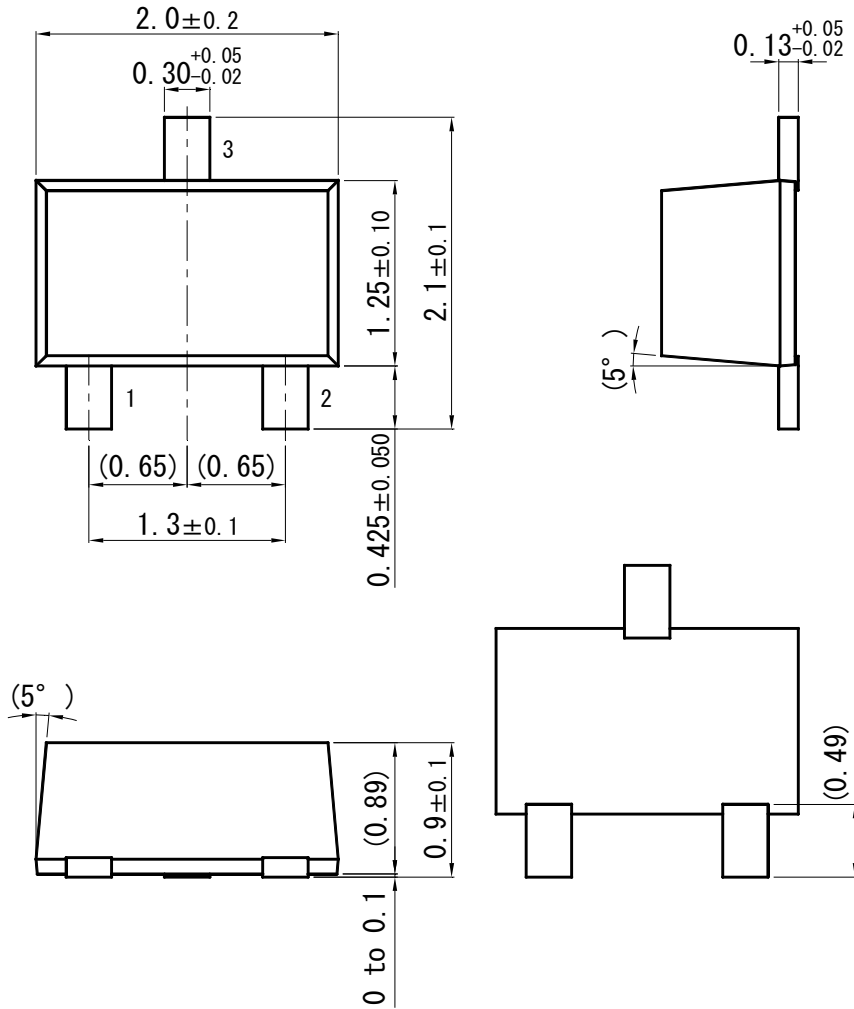
Safe Operating Area



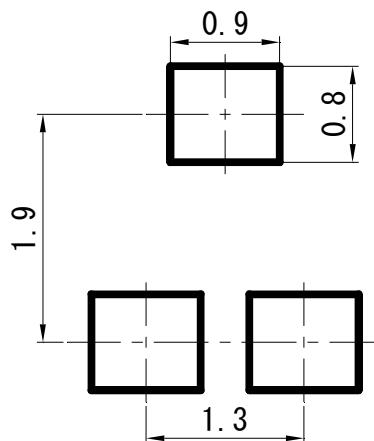


SMini3-F2-B

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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