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

### Marking Symbol
V6

### Basic Part Number
Dual FK350601 (Individual)

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

### Absolute Maximum Ratings \( T_a = 25 \, ^\circ\text{C} \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Rating</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain-source breakdown voltage</td>
<td>VDSS</td>
<td>60</td>
<td>V</td>
</tr>
<tr>
<td>Gate-source breakdown voltage</td>
<td>VGSS</td>
<td>\pm12</td>
<td>V</td>
</tr>
<tr>
<td>Drain current</td>
<td>ID</td>
<td>100</td>
<td>mA</td>
</tr>
<tr>
<td>Pulse drain current</td>
<td>IDp</td>
<td>200</td>
<td>mA</td>
</tr>
<tr>
<td>Total power dissipation</td>
<td>PT</td>
<td>150</td>
<td>mW</td>
</tr>
<tr>
<td>Channel temperature</td>
<td>Tch</td>
<td>150</td>
<td>°C</td>
</tr>
<tr>
<td>Operating ambient temperature</td>
<td>Topr</td>
<td>-40 to +85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>Tstg</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>

### Internal Connection

1. Source(FET1)
2. Gate(FET1)
3. Drain(FET1)
4. Source(FET2)
5. Gate(FET2)
6. Drain(FET2)

### Pin Name

1. Source(FET1)
2. Gate(FET1)
3. Drain(FET2)
4. Source(FET2)
5. Gate(FET2)
6. Drain(FET1)
### Electrical Characteristics  \( Ta = 25 \, ^\circ C \pm 3 \, ^\circ C \)  

**FET1, FET2**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain-source breakdown voltage</td>
<td>VDSS</td>
<td>ID = 1 mA, VGS = 0</td>
<td>60</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Drain-source cutoff current</td>
<td>IDSS</td>
<td>VDS = 60 V, VGS = 0</td>
<td></td>
<td>1.0</td>
<td></td>
<td>( \mu A )</td>
</tr>
<tr>
<td>Gate-source cutoff current</td>
<td>IGSS</td>
<td>VGS = \pm 10 V, VDS = 0</td>
<td></td>
<td>\pm 10</td>
<td></td>
<td>( \mu A )</td>
</tr>
<tr>
<td>Gate threshold voltage</td>
<td>VTH</td>
<td>ID = 1.0 ( \mu A ), VDS = 3.0 V</td>
<td>0.9</td>
<td>1.2</td>
<td>1.5</td>
<td>V</td>
</tr>
<tr>
<td>Drain-source ON resistance</td>
<td>RDS(on)1</td>
<td>ID = 10 mA, VGS = 2.5 V</td>
<td>8</td>
<td>15</td>
<td></td>
<td>( \Omega )</td>
</tr>
<tr>
<td></td>
<td>RDS(on)2</td>
<td>ID = 10 mA, VGS = 4.0 V</td>
<td>6</td>
<td>12</td>
<td></td>
<td>( \Omega )</td>
</tr>
<tr>
<td>Forward transfer admittance</td>
<td>[Yfs]</td>
<td>ID = 10 mA, VDS = 3.0 V</td>
<td>20</td>
<td>60</td>
<td></td>
<td>mS</td>
</tr>
<tr>
<td>Input capacitance</td>
<td>Ciss</td>
<td>ID = 10 mA</td>
<td>12</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Output capacitance</td>
<td>Coss</td>
<td>VDS = 3 V, VGS = 0, f = 1 MHz</td>
<td>7</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Reverse transfer capacitance</td>
<td>Crss</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Turn-on time (^1)</td>
<td>ton</td>
<td>VDD = 3 V, VGS = 0 to 3 V</td>
<td>100</td>
<td></td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ID = 10 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn-off time (^1)</td>
<td>toff</td>
<td>VDD = 3 V, VGS = 3 to 0 V</td>
<td>100</td>
<td></td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ID = 10 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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
*1 Turn-on, Turn-off measurement circuit

```
VDD=3V

ID=10mA
RL=300Ω

Vin
VGS=0~3V

50Ω

Vout

S
G
D

90%
10%

V in

10%
90%

Vout
ton
toff
```
Dynamic Input/Output Characteristics

- **Capacitance - VDS**
  - Ciss
  - Coss
  - Crss

- **RDS(on) - ID**
  - Drain-source On-state Resistance RDS(on) (Ω)
  - VGS = 4.5 V

- **ID - VDS**
  - Drain Current ID (A)

- **ID - VGS**
  - Drain current ID (A)
  - Gate-source voltage VGS (V)

- **VDS - VGS**
  - Drain-source Voltage VDS (V)
  - Gate-source Voltage VGS (V)

- **Capacitance - VDS**
  - Drain-source Voltage VDS (V)

- **Dynamic Input/Output Characteristics**
  - Gate-source Voltage VGS (V)
  - Total Gate Charge Qg (nC)

**Product Standards**

**MOS FET**

**Technical Data (reference)**

**FC6546010R**

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**Panasonic**
SMini6-F3-B

Land Pattern (Reference) (Unit: mm)
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