



2SK3352 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V drive.
- DC / DC converter applications.

Specifications

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|------------------|------------------------|-------------|------|
| Drain-to-Source Voltage | V _{DSS} | | 30 | V |
| Gate-to-Source Voltage | V _{GSS} | | ±20 | V |
| Drain Current (DC) | I _D | | 45 | A |
| Drain Current (Pulse) | I _{DP} | PW≤10μs, duty cycle≤1% | 80 | A |
| Allowable Power Dissipation | P _D | | 1.65 | W |
| | | T _c =25°C | 40 | W |
| Channel Temperature | T _{ch} | | 150 | °C |
| Storage Temperature | T _{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|----------------------|--|---------|------|-----|------|
| | | | min | typ | max | |
| Drain-to-Source Breakdown Voltage | V _{(BR)DSS} | I _D =1mA, V _{GS} =0V | 30 | | | V |
| Zero-Gate Voltage Drain Current | I _{DSS} | V _{DS} =30V, V _{GS} =0V | | | 1 | μA |
| Gate-to-Source Leakage Current | I _{GSS} | V _{GS} =±16V, V _{DS} =0V | | | ±10 | μA |
| Cutoff Voltage | V _{GS(off)} | V _{DS} =10V, I _D =1mA | 1.0 | | 2.4 | V |
| Forward Transfer Admittance | y _{fs} | V _{DS} =10V, I _D =20A | 19 | 27 | | S |
| Static Drain-to-Source On-State Resistance | R _{DS(on)1} | I _D =20A, V _{GS} =10V | | 11 | 15 | mΩ |
| | R _{DS(on)2} | I _D =10A, V _{GS} =4.5V | | 15 | 21 | mΩ |
| Input Capacitance | C _{iss} | V _{DS} =10V, f=1MHz | | 1400 | | pF |
| Output Capacitance | C _{oss} | V _{DS} =10V, f=1MHz | | 420 | | pF |
| Reverse Transfer Capacitance | C _{rss} | V _{DS} =10V, f=1MHz | | 210 | | pF |
| Turn-ON Delay Time | t _{d(on)} | See specified Test Circuit. | | 14 | | ns |
| Rise Time | t _r | See specified Test Circuit. | | 530 | | ns |
| Turn-OFF Delay Time | t _{d(off)} | See specified Test Circuit. | | 100 | | ns |
| Fall Time | t _f | See specified Test Circuit. | | 150 | | ns |

Marking : K3352

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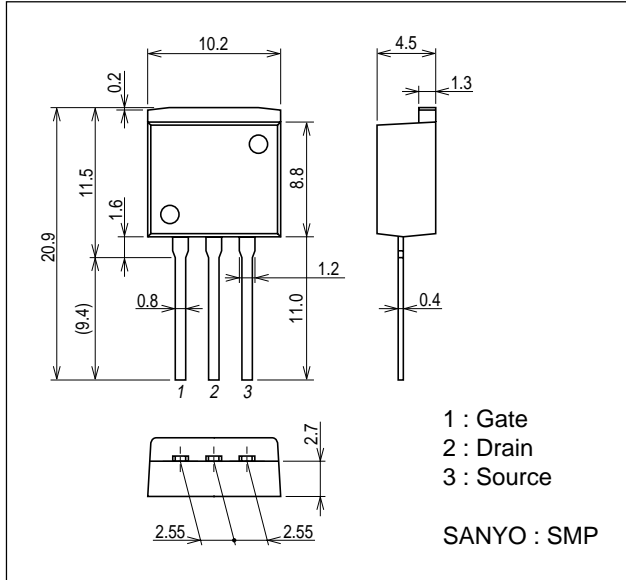
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|----------|-----------------------------------|---------|-----|-----|------|
| | | | min | typ | max | |
| Total Gate Charge | Qg | $V_{DS}=10V, V_{GS}=10V, I_D=20A$ | | 28 | | nC |
| Gate-to-Source Charge | Qgs | $V_{DS}=10V, V_{GS}=10V, I_D=20A$ | | 4.6 | | nC |
| Gate-to-Drain Charge | Qgd | $V_{DS}=10V, V_{GS}=10V, I_D=20A$ | | 5 | | nC |
| Diode Forward Voltage | V_{SD} | $I_S=45A, V_{GS}=0V$ | | 1.0 | 1.2 | V |

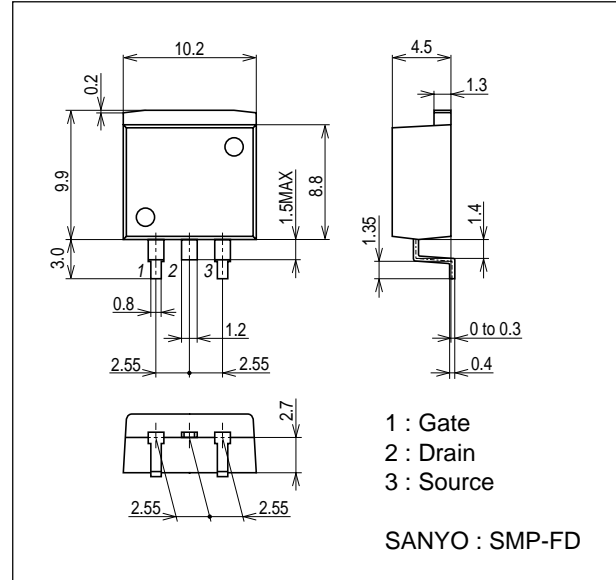
Package Dimensions

unit : mm
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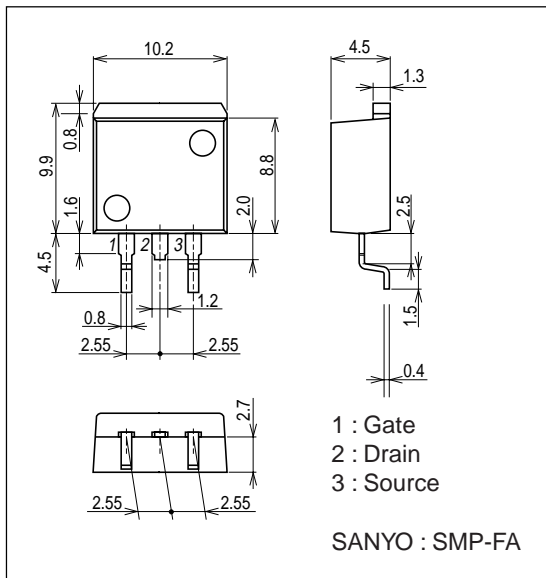
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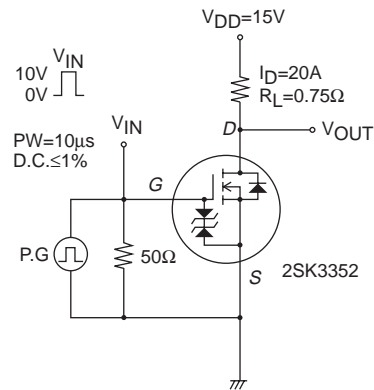


Package Dimensions

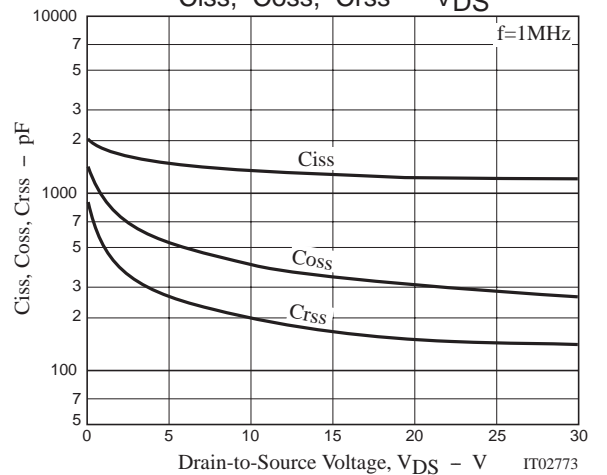
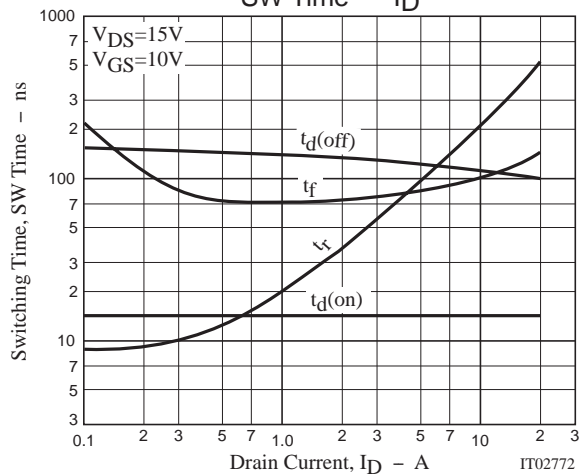
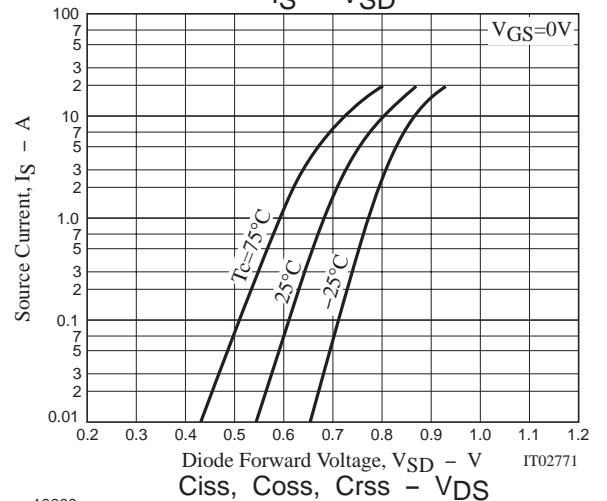
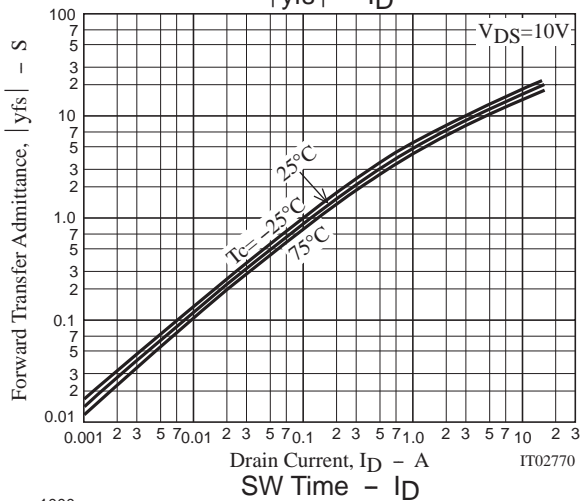
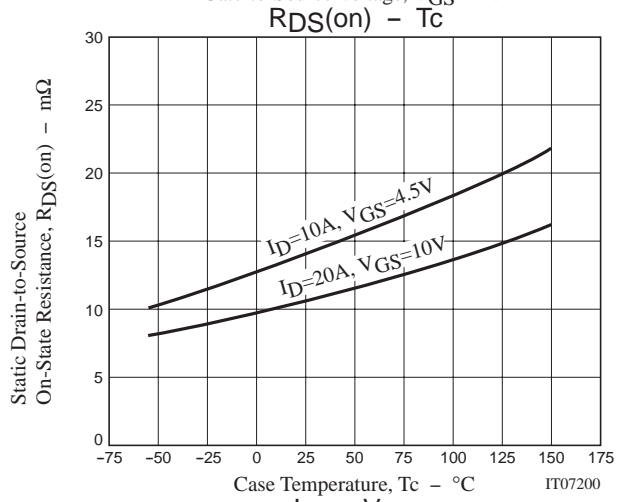
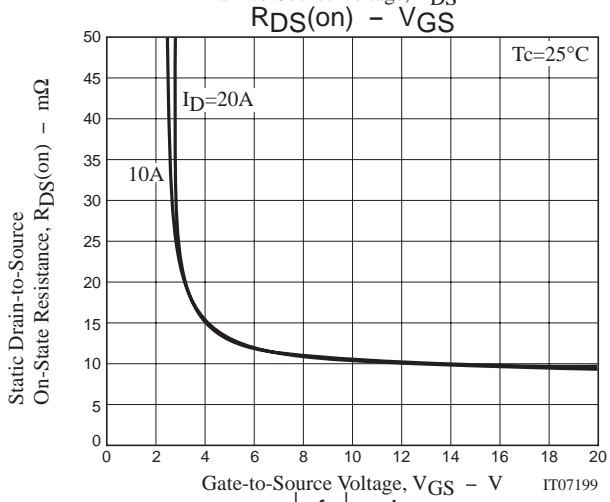
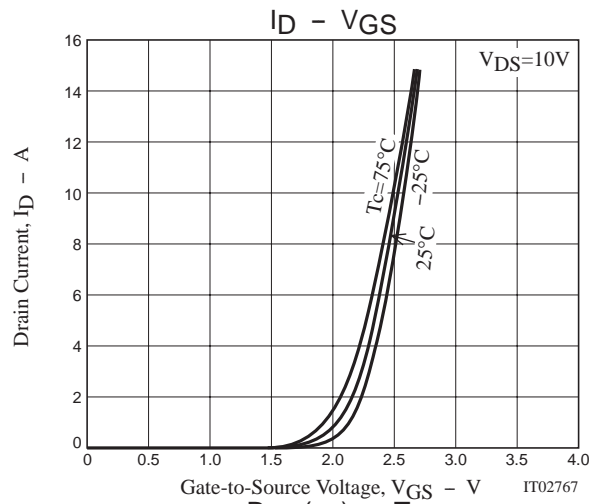
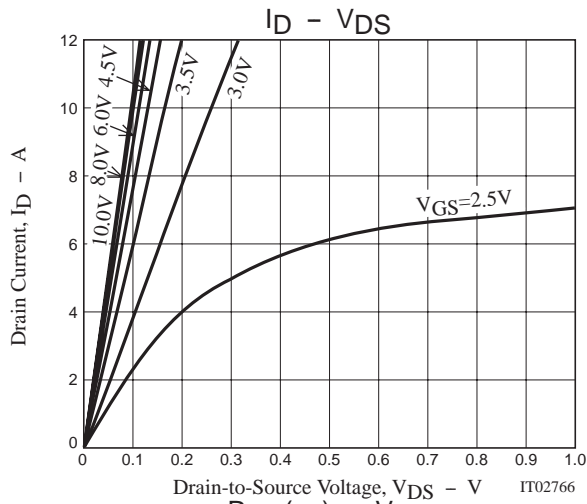
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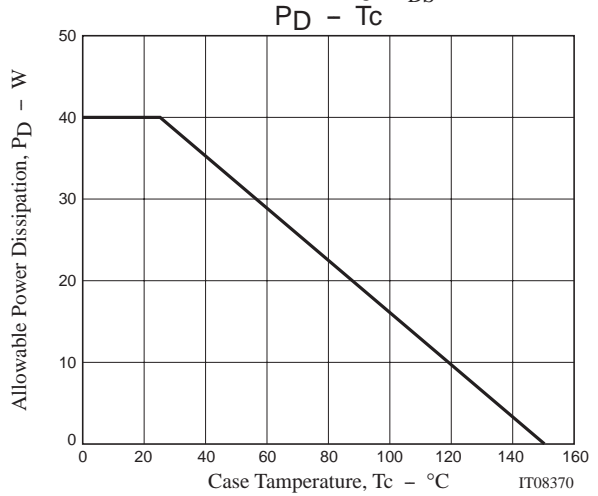
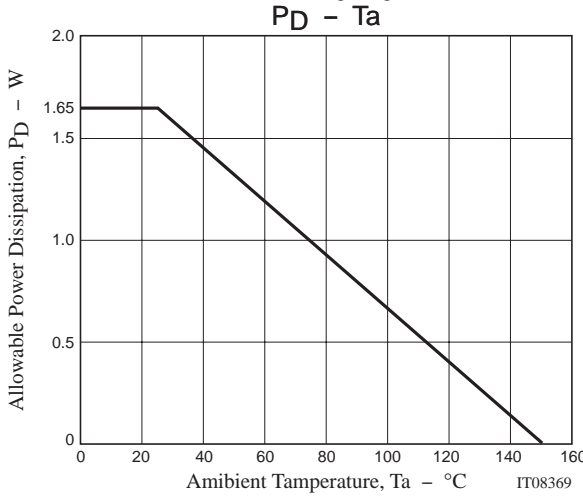
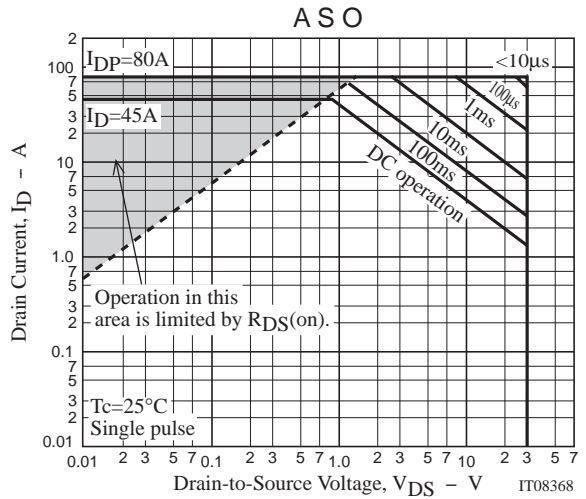
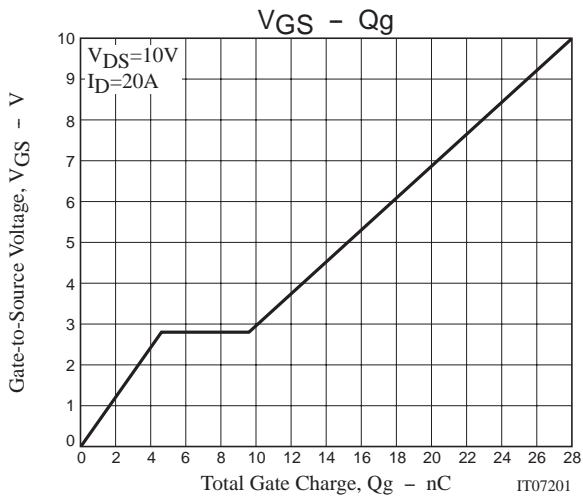


Switching Time Test Circuit



2SK3352





Note on usage : Since the 2SK3352 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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