

SANYO Semiconductors DATA SHEET

2SK2628ALS-

N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Low Qg.
- · Ultrahigh-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------------|----------------------|----------------------------------------------------|-------------|------|
| Drain-to-Source Voltage | VDSS | | 600 | V |
| Gate-to-Source Voltage | VGSS | | ±30 | V |
| Drain Current (DC) | I _{Dc} *1 | Limited only by maximum temperature | 7 | Α |
| | I _{Dpack*2} | SANYO's ideal heat dissipation condition | 6.2 | Α |
| Drain Current (Pulse) | IDP | PW≤10μs, duty cycle≤1% | 24 | Α |
| Allowable Power Dissipation | D- | | 2.0 | W |
| | PD | Tc=25°C (SANYO's ideal heat dissipation condition) | 35 | W |
| Channel Temperature | Tch | | 150 | °C |
| Storage Temperature | Tstg | | -55 to +150 | °C |
| Avalanche Energy (Single Pulse) *3 | EAS | | 98 | mJ |
| Avalanche Current *4 | IAV | | 6 | Α |

^{*1} Shows chip capability

Marking: K2628

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^{*2} Package limited

^{*3} V_{DD}=50V, L=5mH, I_{AV}=6A

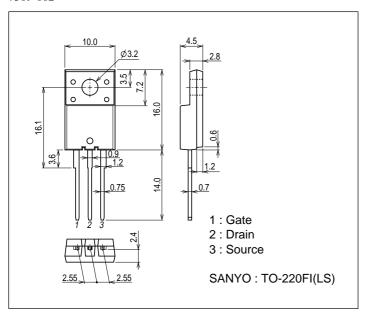
^{*4} L≤5mH, single pulse

Electrical Characteristics at Ta=25°C

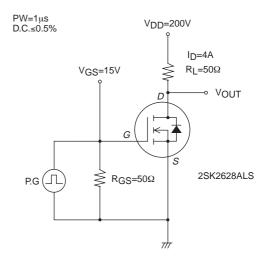
| Parameter | Symbol | Conditions | Ratings | | | 1.1-24 |
|--------------------------------------------|----------------------|-----------------------------------------------------------------|---------|------|------|--------|
| | | | min | typ | max | Unit |
| Drain-to-Source Breakdown Voltage | V(BR)DSS | ID=1mA, VGS=0V | 600 | | | V |
| Zero-Gate Voltage Drain Current | IDSS | V _{DS} =600V, V _{GS} =0V | | | 1.0 | mA |
| Gate-to-Source Leakage Current | IGSS | VGS=±30V, VDS=0V | | | ±100 | nA |
| Cutoff Voltage | VGS(off) | V _{DS} =10V, I _D =1mA | 3.5 | | 5.5 | V |
| Forward Transfer Admittance | yfs | V _{DS} =10V, I _D =4A | 2.0 | 4.0 | | S |
| Static Drain-to-Source On-State Resistance | RDS(on) | ID=2A, VGS=15V | | 0.9 | 1.1 | Ω |
| Input Capacitance | Ciss | V _{DS} =20V, f=1MHz | | 1050 | | pF |
| Output Capacitance | Coss | V _{DS} =20V, f=1MHz | | 320 | | pF |
| Reverse Transfer Capacitance | Crss | V _{DS} =20V, f=1MHz | | 180 | | pF |
| Total Gate Charge | Qg | V _{DS} =200V, V _{GS} =10V, I _D =6A | | 30 | | nC |
| Turn-ON Delay Time | t _d (on) | See specified Test Circuit. | | 23 | | ns |
| Rise Time | tr | See specified Test Circuit. | | 35 | | ns |
| Turn-OFF Delay Time | t _d (off) | See specified Test Circuit. | | 90 | | ns |
| Fall Time | tf | See specified Test Circuit. | | 35 | | ns |
| Diode Forward Voltage | VSD | IS=6A, VGS=0V | | 0.85 | 1.2 | V |

Package Dimensions

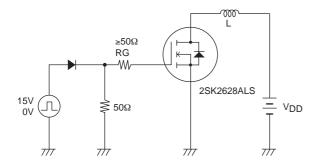
unit : mm (typ) 7509-002

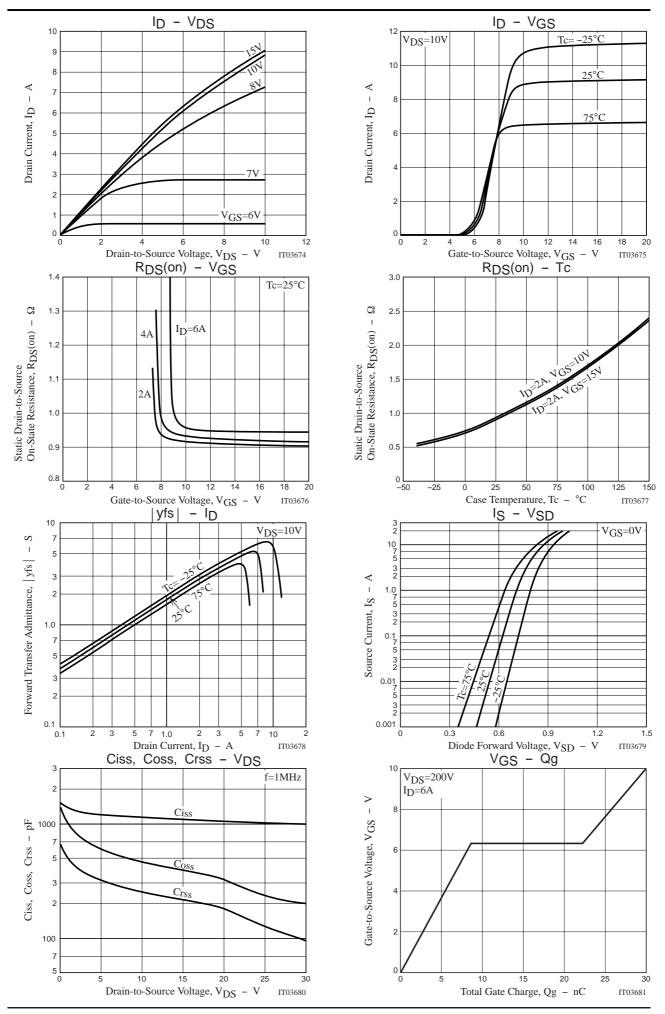


Switching Time Test Circuit

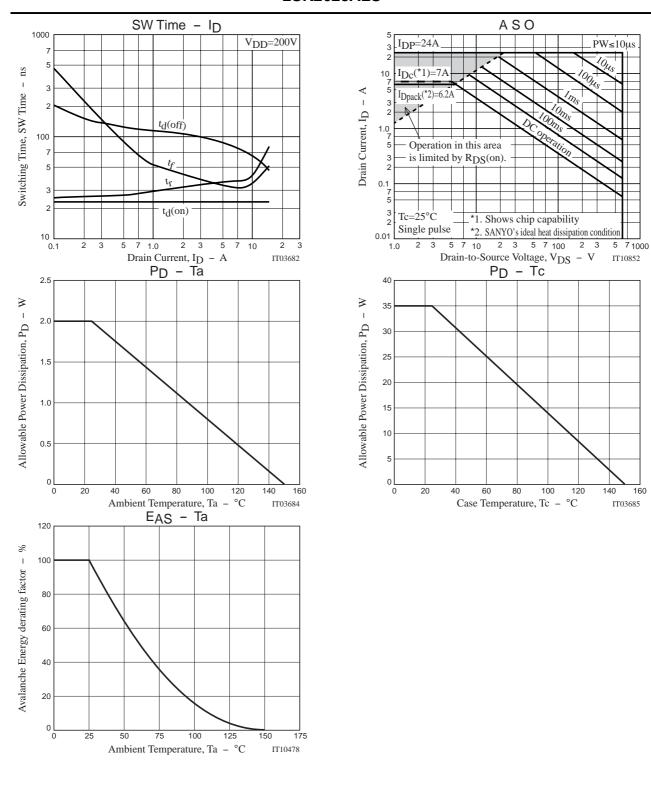


Avalanche Resistance Test Circuit





2SK2628ALS



Note on usage: Since the 2SK2628ALS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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