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| SANYO | No.3559 | <h1 style="margin: 0;">2SK1421</h1> <p style="margin: 0;">N-Channel MOS Silicon FET</p> <p style="margin: 0;">Very High-Speed Switching Applications</p> |
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Features

- Low ON-state resistance.
- Very high-speed switching.
- Converters.
- Micaless package facilitating mounting.

Absolute Maximum Ratings at Ta = 25°C

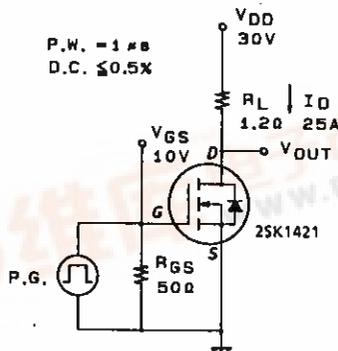
| | | | unit |
|-----------------------------|------------------|-----------------------------|-------|
| Drain to Source Voltage | V _{DSS} | 60 | V |
| Gate to Source Voltage | V _{GSS} | ±20 | V |
| Drain Current(DC) | I _D | 40 | A |
| Drain Current(Pulse) | I _{DP} | PW ≤ 10 μs, duty cycle ≤ 1% | 160 A |
| Allowable Power Dissipation | P _D | Tc = 25°C | 40 W |
| | | | 2.0 W |
| Channel Temperature | T _{ch} | 150 | °C |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| | | | min | typ | max | unit |
|--|----------------------|---|------|-------|------|------|
| D-S Breakdown Voltage | V _{(BR)DSS} | I _D = 1mA, V _{GS} = 0 | 60 | | | V |
| Zero Gate Voltage Drain Current | I _{DSS} | V _{DS} = 60V, V _{GS} = 0 | | | 100 | μA |
| Gate to Source Leakage Current | I _{GSS} | V _{GS} = ±20V, V _{DS} = 0 | | | ±100 | nA |
| Cutoff Voltage | V _{GS(off)} | V _{DS} = 10V, I _D = 1mA | 1.5 | | 2.5 | V |
| Forward Transfer Admittance | Y _{fs} | V _{DS} = 10V, I _D = 25A | 15 | 25 | | S |
| Static Drain to Source on State Resistance | R _{DS(on)} | I _D = 25A, V _{GS} = 10V | 0.02 | 0.026 | | Ω |
| Input Capacitance | C _{iss} | V _{DS} = 20V, f = 1MHz | | 2400 | | pF |
| Output Capacitance | C _{oss} | V _{DS} = 20V, f = 1MHz | | 1100 | | pF |
| Reverse Transfer Capacitance | C _{rss} | V _{DS} = 20V, f = 1MHz | | 300 | | pF |
| Turn-ON Delay Time | t _{d(on)} | I _D = 25A, V _{GS} = 10V V _{DD} = 30V, R _{GS} = 50Ω | | 31 | | ns |
| Rise Time | t _r | | 159 | | ns | |
| Turn-OFF Delay Time | t _{d(off)} | | 240 | | ns | |
| Fall Time | t _f | | 140 | | ns | |
| Diode Forward Voltage | V _{SD} | I _S = 40A, V _{GS} = 0 | | | 1.8 | V |

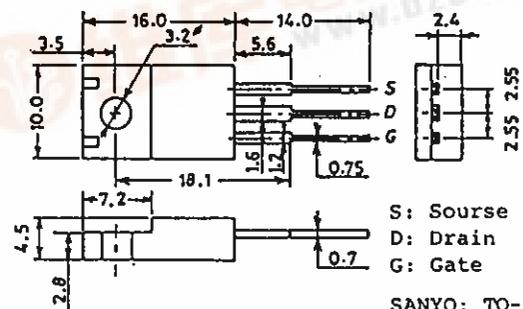
(Note) Be careful in handling the 2SK1421 because it has no protection diode between gate and source.

Switching Time Test Circuit



Package Dimensions 2063

(unit : mm)

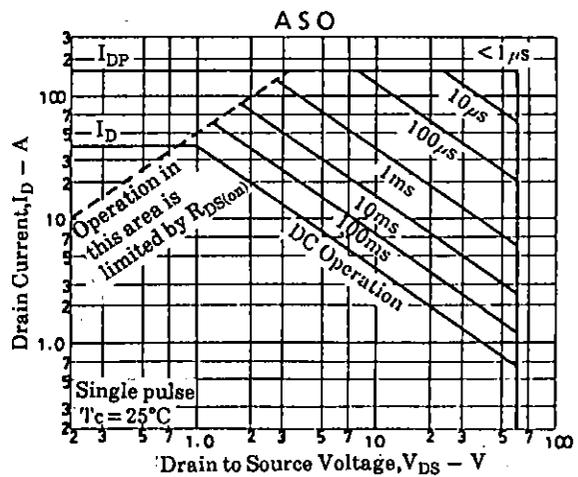
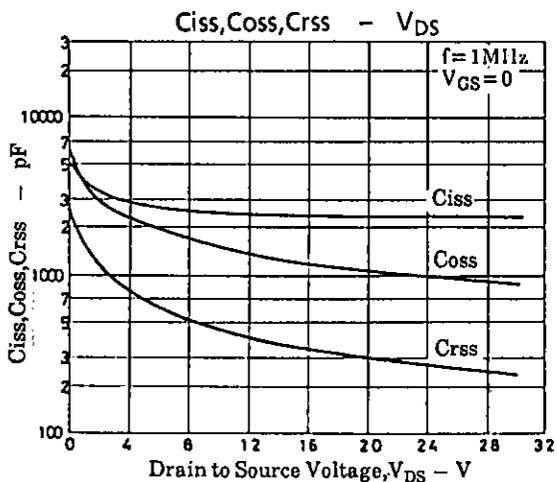
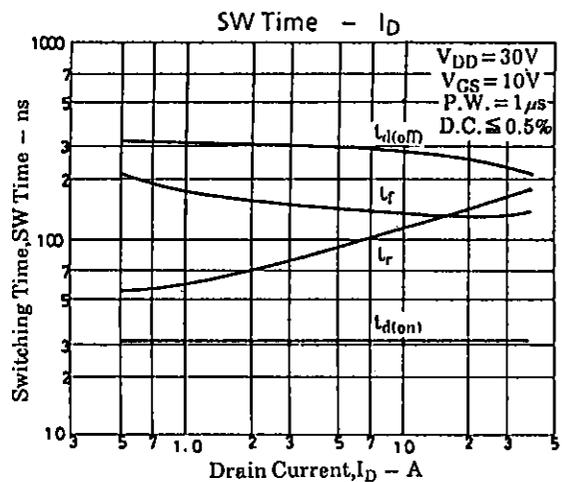
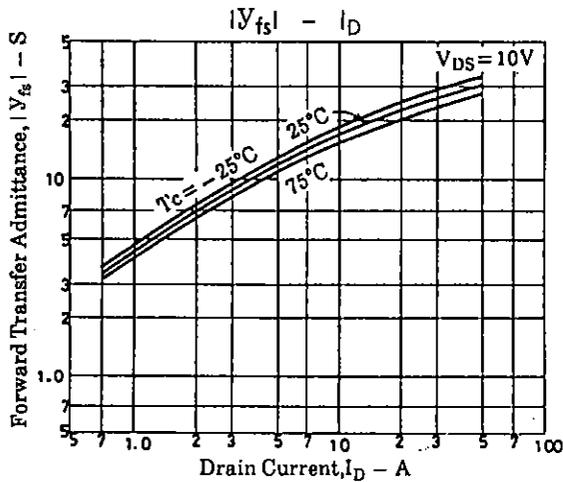
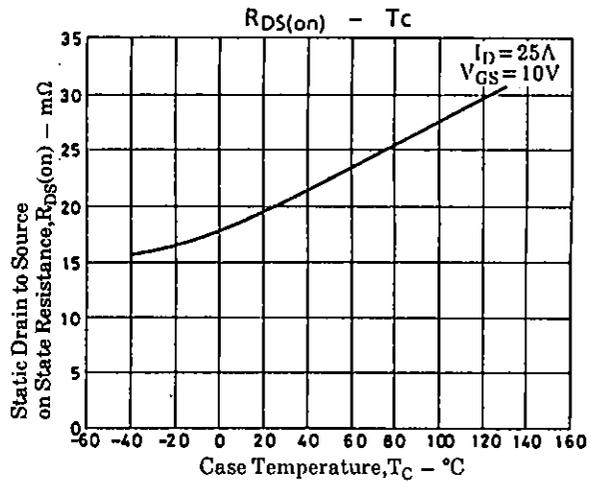
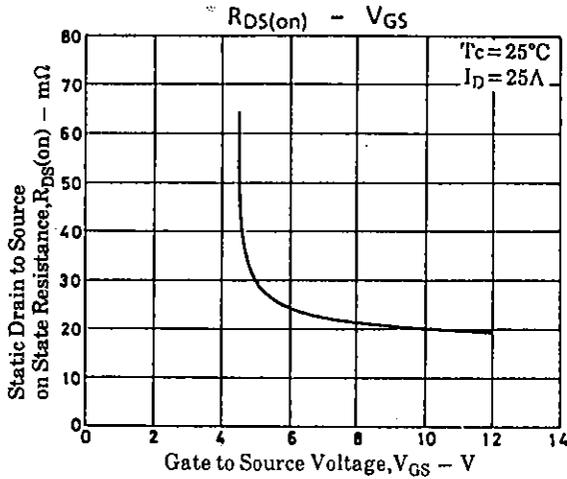
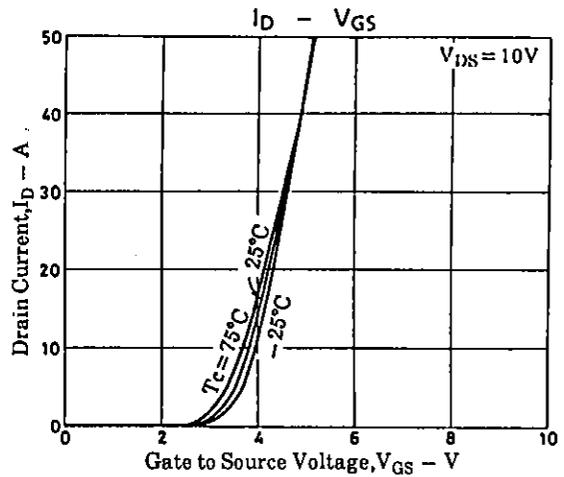
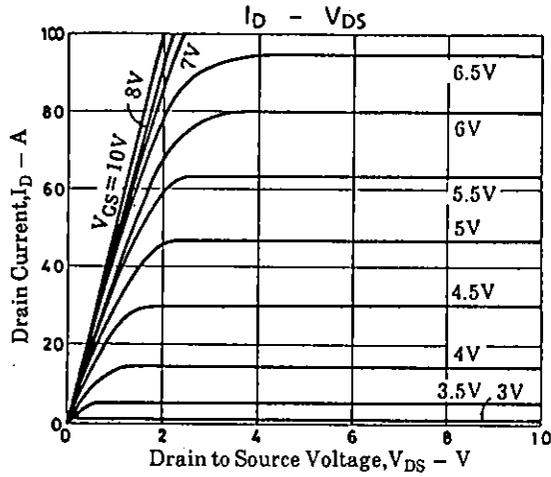


S: Source
D: Drain
G: Gate

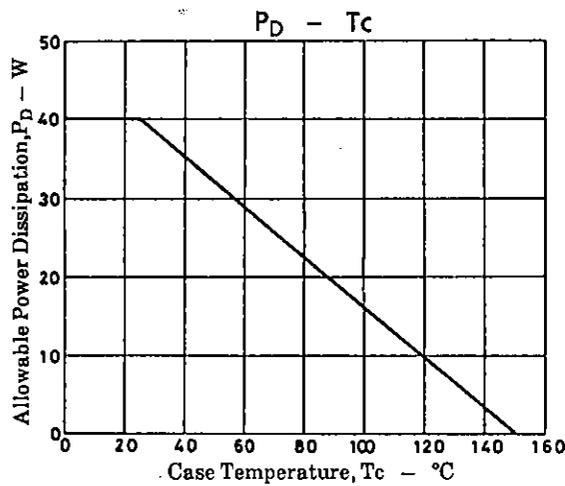
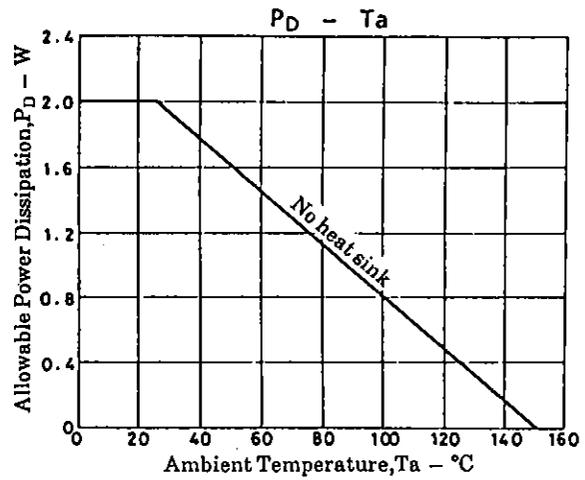
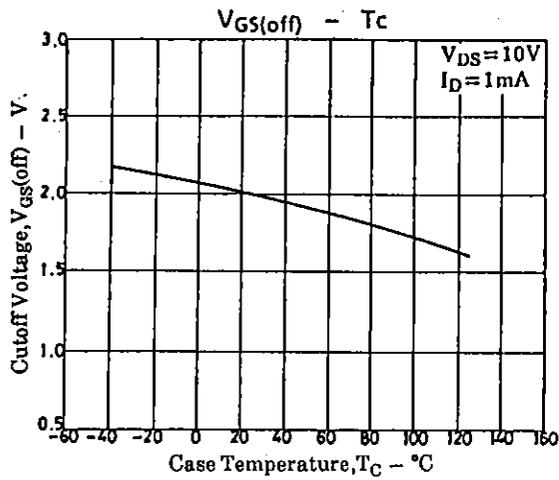
SANYO: TO-220ML



2SK1421



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