**Fuji Power MOSFET SuperFAP-G series Target Specification** ***PRELIMINARY***

# 2SK3673-01MR (700V/1.18Ω/10A)

**1) Package** TO-220F

**2) Absolute Maximum Ratings (Tc=25℃ unless otherwise specified)**

| Items | Symbols | Ratings | Units | |
|---|---|---|---|---|
| Drain-Source Voltage | $V_{DS}$ | 700 | V | |
| Continuous Drain Current | $I_D$ | ±10 | A | |
| Pulsed Drain Current | $I_{D(pulse)}$ | ±40 | A | |
| Gate-Source Voltage | $V_{GS}$ | ±30 | V | |
| Repetitive and Non-Repetitive Maximum Avalanche Current | $I_{AR}$ | 10 | A | |
| Non-Repetitive Maximum Avalanche Energy | $E_{AS}$ | 242.2 | mJ | *1 |
| Maximum Drain-Source dV/dt | $dV_{DS}/dt$ | 20 | kV/us | |
| Peak Diode recovery dV/dt | dV/dt | 5 | kV/us | *2 |
| Maximum Power Dissipation | $P_{D\ @Tc=25℃}$ | 60 | W | |
| | $P_{D\ @Ta=25℃}$ | 2.16 | W | |
| Operating and Storage Temperature range | $T_{ch}$ | 150 | ℃ | |
| | $T_{stg}$ | -55 ～ +150 | ℃ | |

**3)Electrical Characteristics (Tch=25℃ unless otherwise specified)**

| Items | Symbols | Test Conditions | | min. | typ. | max. | Units |
|---|---|---|---|---|---|---|---|
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $I_D$=250uA | $V_{GS}$=0V | 700 | --- | --- | V |
| Gate Threshold Voltage | $V_{GS}$(th) | $I_D$=250uA | $V_{DS}$=$V_{GS}$ | 3.0 | --- | 5.0 | V |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=700V | $T_{ch}$=25℃ | --- | --- | 25 | μA |
| | | $V_{GS}$=0V | $T_{ch}$=125℃ | --- | --- | 250 | μA |
| Gate-Source Leakage Current | $I_{GSS}$ | $V_{GS}$=±30V | $V_{DS}$=0V | --- | --- | 100 | nA |
| Drain-Source On-State Resistance | $R_{DS}$(on) | $I_D$=5A | VGS=10V | --- | --- | 1.18 | Ω |
| Input Capacitance | $C_{iss}$ | $V_{DS}$=25V | | --- | 1145 | --- | pF |
| Output Capacitance | $C_{oss}$ | $V_{GS}$=0V | | --- | 135 | --- | |
| Reverse Transfer Capacitance | $C_{rss}$ | f=1MHz | | --- | 7 | --- | |
| Total Gate Charge | Qg | Vcc=350V | | --- | 35 | --- | nC |
| Gate to Source Charge | Qgs | $I_D$=10A | | --- | 11 | --- | |
| Gate to Drain (Miller) Charge | Qgd | $V_{GS}$=10V | | --- | 10 | --- | |
| Avalanche Capability | $I_{AV}$ | L=4.44mH | Tch=25℃ | 10 | --- | --- | A |
| Diode Forward On-Voltage | $V_{SD}$ | $I_F$=10A,VGS=0V,Tch=25℃ | | --- | 1.0 | 1.5 | V |

**4) Thermal Characteristics**

| Items | Symbols | Test Conditions | min. | typ. | max. | Units |
|---|---|---|---|---|---|---|
| Channel to Case | Rth(ch-c) | | | | 2.083 | ℃/W |
| Channel to Ambient | Rth(ch-a) | | | | 58.0 | ℃/W |

*1 L=4.44mH,Vcc=70V

***2 $I_F \leq -I_D$, -di/dt=50A/μs, Vcc≤$BV_{DSS}$, Tch≤150℃**



| | DATE | NAME | APPROVED |
|---|---|---|---|
| DRAWN | '02-07-24 | T. Kuboyama | T. HOSEN |
| CHECKED | '02-07-24 | T. Yamada | |
| REVISIONS | | | |

**Fuji Electric Co.,Ltd.**

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