# SHINDENGEN

## VX-2 Series Power MOSFET

**N-Channel Enhancement type**

# 2SK2564
## (F8F60VX2)

## 600V 8A

### FEATURES

- Input capacitance (Ciss) is small. Especially, input capacitance at 0 biass is small.
- The static Rds(on) is small.
- The switching time is fast.
- Avalanche resistance guaranteed.

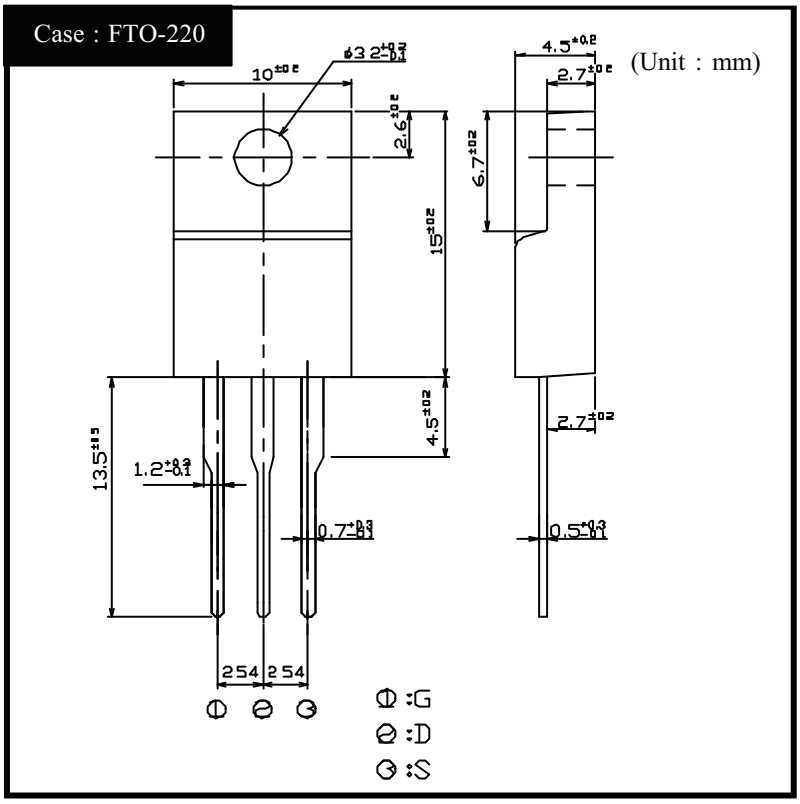
### APPLICATION

- Switching power supply of AC 100-200V input
- Inverter
- Power Factor Control Circuit

### OUTLINE DIMENSIONS

Case : FTO-220

(Unit : mm)




### RATINGS

●Absolute Maximum Ratings (Tc = 25℃)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage Temperature | Tstg | | -55～150 | ℃ |
| Channel Temperature | Tch | | 150 | |
| Drain-Source Voltage | VDSS | | 600 | V |
| Gate-Source Voltage | VGSS | | ±30 | |
| Continuous Drain Current (DC) | ID | | 8 | A |
| Continuous Drain Current (Peak) | IDP | | 24 | |
| Continuous Source Current (DC) | IS | | 8 | |
| Total Power Dissipation | PT | | 50 | W |
| Single Pulse Avalanche Current | IAS | Tch = 25℃ | 8 | A |
| Dielectric Strength | Vdis | Terminals to case, AC 1 minute | 2 | kV |
| Mounting Torque | TOR | (Recommended torque : 0.3N•m) | 0.5 | N•m |

●Electrical Characteristics Tc = 25℃

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Drain-Source Breakdown Voltage | $V_{(BR)DSS}$ | $I_D$ = 1mA, $V_{GS}$ = 0V | 600 | | | V |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$ = 600V, $V_{GS}$ = 0V | | | 250 | μA |
| Gate-Source Leakage Current | $I_{GSS}$ | $V_{GS}$ = ±30V, $V_{DS}$ = 0V | | | ±0.1 | |
| Forward Transconductance | $g_{fs}$ | $I_D$ = 4A, $V_{DS}$ = 10V | 2.4 | 5.5 | | S |
| Static Drain-Source On-state Resistance | $R_{DS(ON)}$ | $I_D$ = 4A, $V_{GS}$ = 10V | | 0.9 | 1.2 | Ω |
| Gate Threshold Voltage | $V_{TH}$ | $I_D$ = 1mA, $V_{DS}$ = 10V | 2.5 | 3.0 | 3.5 | V |
| Source-Drain Diode Forwade Voltage | $V_{SD}$ | $I_S$ = 4A, $V_{GS}$ = 0V | | | 1.5 | |
| Thermal Resistance | θ jc | junction to case | | | 2.5 | ℃/W |
| Total Gate Charge | $Q_g$ | $V_{DD}$ = 400V, $V_{GS}$ = 10V, $I_D$ = 8A | | 42 | | nC |
| Input Capacitance | $C_{iss}$ | $V_{DS}$ = 10V, $V_{GS}$ = 0V, f = 1MHz | | 1130 | | pF |
| Reverse Transfer Capacitance | $C_{rss}$ | | | 85 | | |
| Output Capacitance | $C_{oss}$ | | | 245 | | |
| Turn-On Time | $t_{on}$ | $I_D$ = 4A, $R_L$ = 37.5Ω, $V_{GS}$ = 10V | | 55 | 80 | ns |
| Turn-Off Time | $t_{off}$ | | | 195 | 290 | |