

MOS FET 2SK3803 (under development)

Absolute Maximum Ratings (Ta=25°C)

| Symbol | Ratings | Unit |
|---------------------------|----------------------------|------|
| V _{DSS} | 40 | V |
| V _{GSS} | ±20 | V |
| I _D | ±85 | A |
| I _{D (pulse)} *1 | ±170 | A |
| P _D | 100 (T _C =25°C) | W |
| EAS*2 | 730 | mJ |
| T _{ch} | 150 | °C |
| T _{stg} | -55 to +150 | °C |

* 1: P_W ≤ 100 μs, duty cycle ≤ 1%

* 2: V_{DD} = 20V, L = 1mH, I_L = 20A, unclamped, R_G = 50Ω

Electrical Characteristics (Ta=25°C)

| Symbol | Test Conditions | Ratings | | | Unit |
|-----------------------|---|---------|-------|-----|------|
| | | min | typ | max | |
| V _{(BR) DSS} | I _D = 100 μA, V _{GS} = 0V | 40 | | | V |
| I _{GSS} | V _{GS} = ±15V | | | ±10 | μA |
| I _{DSS} | V _{DS} = 40V, V _{GS} = 0V | | | 100 | μA |
| V _{TH} | V _{DS} = 10V, I _D = 1mA | 2.0 | | 4.0 | V |
| R _{e (yfs)} | V _{DS} = 10V, I _D = 42A | 50 | | | S |
| R _{DS (ON)} | V _{GS} = 10V, I _D = 42A | | 2.1 | 3.0 | mΩ |
| C _{iss} | V _{DS} = 10V | | 10500 | | pF |
| C _{oss} | f = 1.0MHz | | 2400 | | pF |
| C _{rss} | V _{GS} = 0V | | 1900 | | pF |
| t _{d (on)} | I _D = 42A | | 90 | | ns |
| t _r | V _{DD} = 20V, R _G = 22Ω | | 230 | | ns |
| t _{d (off)} | V _{GS} = 10V | | 490 | | ns |
| t _f | | | 760 | | ns |
| V _{SD} | I _{SD} = 50A, V _{GS} = 0V | | 0.85 | 1.2 | V |
| t _{tr} | I _{SD} = 25A, di/dt = 50A/μs | | 90 | | ns |

External Dimensions TO220S

