
2SK2736

Silicon N Channel DV-L MOS FET
High Speed Power Switching

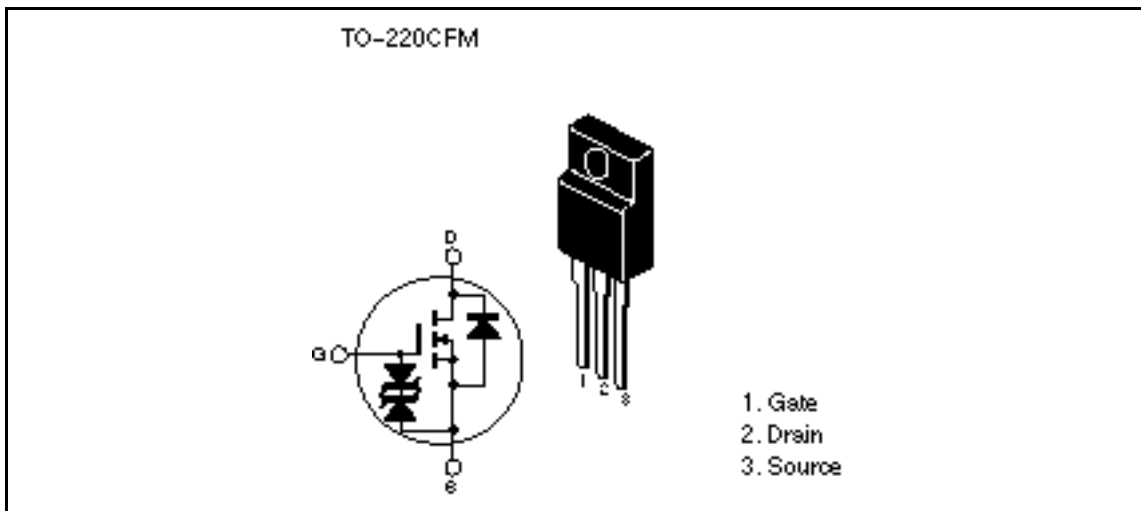
HITACHI

ADE-208-544
1st. Edition

Features

- Low on-resistance
 $R_{DS(on)} = 20\text{ m}\Omega$ typ. ($V_{GS} = 10\text{V}$, $I_D = 15\text{A}$)
- 4V gate drive devices.
- High speed switching

Outline



2SK2736

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|---|---------------------|-------------|------|
| Drain to source voltage | V_{DSS} | 30 | V |
| Gate to source voltage | V_{GSS} | ±20 | V |
| Drain current | I_D | 30 | A |
| Drain peak current | $I_{D(pulse)}^{*1}$ | 120 | A |
| Body to drain diode reverse drain current | I_{DR} | 30 | A |
| Channel dissipation | Pch*2 | 25 | W |
| Channel temperature | Tch | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

Notes: 1. PW = 10µs, duty cycle = 1 %
2. Value at Tc = 25°C

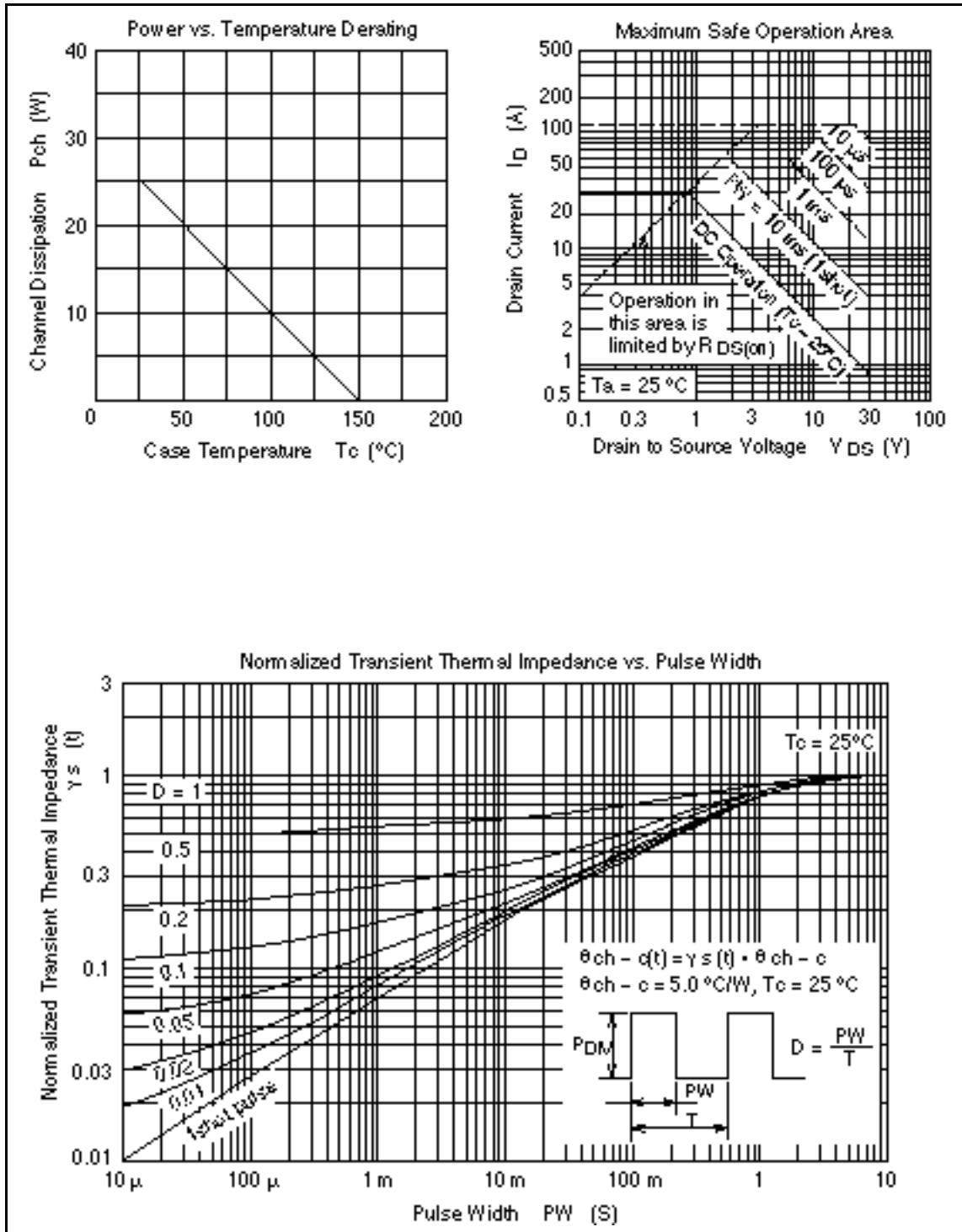
Electrical Characteristics (Ta = 25°C)

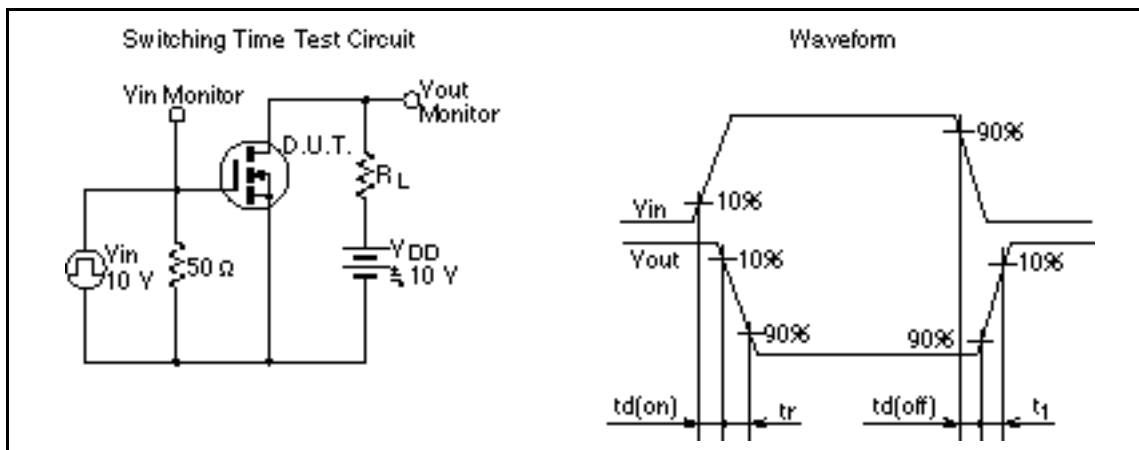
| Item | Symbol | Min | Typ | Max | Unit | Test Conditions |
|--|---------------|-----|-----|-----|------|---|
| Drain to source breakdown voltage | $V_{(BR)DSS}$ | 30 | — | — | V | $I_D = 10mA, V_{GS} = 0$ |
| Gate to source breakdown voltage | $V_{(BR)GSS}$ | ±20 | — | — | V | $I_G = ±100µA, V_{DS} = 0$ |
| Zero gate voltage drain current | I_{DSS} | — | — | 10 | µA | $V_{DS} = 30V, V_{GS} = 0$ |
| Gate to source leak current | I_{GSS} | — | — | ±10 | µA | $V_{GS} = ±16V, V_{DS} = 0$ |
| Gate to source cutoff voltage | $V_{GS(off)}$ | 1.0 | — | 2.0 | V | $I_D = 1mA, V_{DS} = 10V$ |
| Static drain to source on state resistance | $R_{DS(on)}$ | — | 20 | 28 | m | $I_D = 15A, V_{GS} = 10V^{*1}$ |
| | $R_{DS(on)}$ | — | 35 | 50 | m | $I_D = 15A, V_{GS} = 4V^{*1}$ |
| Forward transfer admittance | $ y_{fs} $ | 12 | 18 | — | S | $I_D = 15A, V_{DS} = 10V^{*1}$ |
| Input capacitance | Ciss | — | 750 | — | pF | $V_{DS} = 10V$ |
| Output capacitance | Coss | — | 520 | — | pF | $V_{GS} = 0$ |
| Reverse transfer capacitance | Crss | — | 210 | — | pF | f = 1MHz |
| Turn-on delay time | $t_{d(on)}$ | — | 16 | — | ns | $V_{GS} = 10V, I_D = 15A$ |
| Rise time | t_r | — | 260 | — | ns | $R_L = 0.67$ |
| Turn-off delay time | $t_{d(off)}$ | — | 85 | — | ns | |
| Fall time | t_f | — | 90 | — | ns | |
| Body to drain diode forward voltage | V_{DF} | — | 1.0 | — | V | $I_F = 30A, V_{GS} = 0$ |
| Body to drain diode reverse recovery time | t_{rr} | — | 45 | — | ns | $I_F = 30A, V_{GS} = 0$ diF/ dt = 50A/µs |

Note: 1. Pulse test

See characteristics curves of 2SK2684

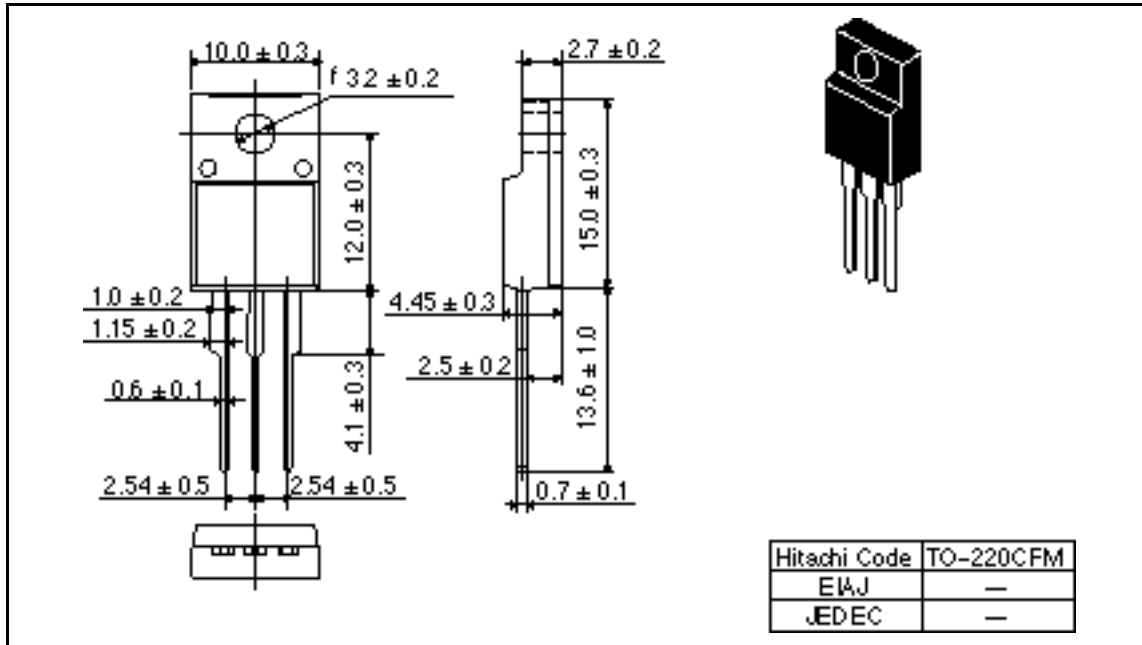
Main Characteristics





Package Dimensions

Unit: mm



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