

60V NChannel EnhancementMode MOSFET 60v 双N沟道增强型MOS管

VDS= 60V

RDS(ON), Vgs@10V, Ids@5.3A = 41mΩ

RDS(ON), Vgs@4.5V, Ids@4.7A = 52mΩ

Features 特性

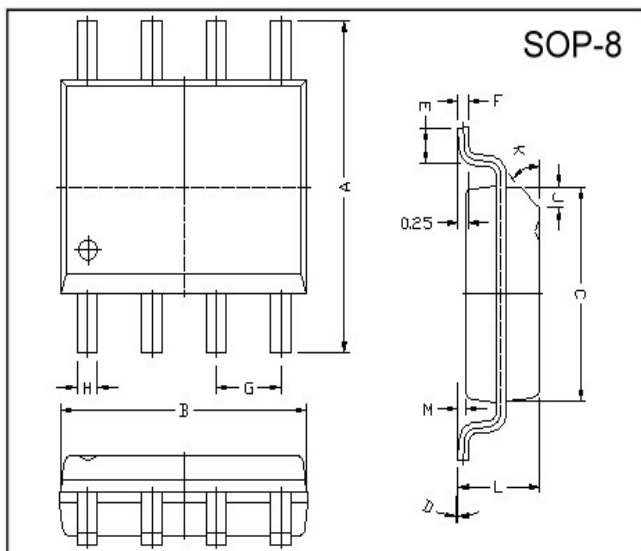
Advanced trench process technology 高级的加工技术

High Density Cell Design For Ultra Low OnResistance

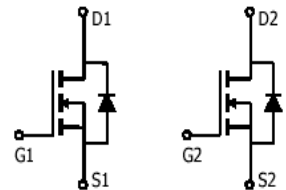
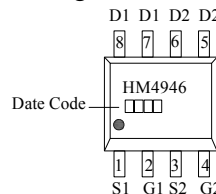
极低的导通电阻高密度的单元设计

Improved ShootThrough FOM 改进的成型工艺

Package Dimensions 封装尺寸及外形图



Marking :



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 5.80 | 6.20 | M | 0.10 | 0.25 |
| B | 4.80 | 5.00 | H | 0.35 | 0.49 |
| C | 3.80 | 4.00 | L | 1.35 | 1.75 |
| D | 0 | 8 | J | 0.375 REF. | |
| E | 0.40 | 0.90 | K | 45 | |
| F | 0.19 | 0.25 | G | 1.27 TYP. | |

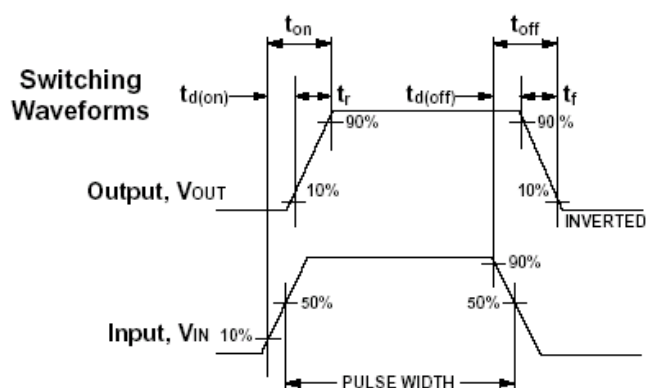
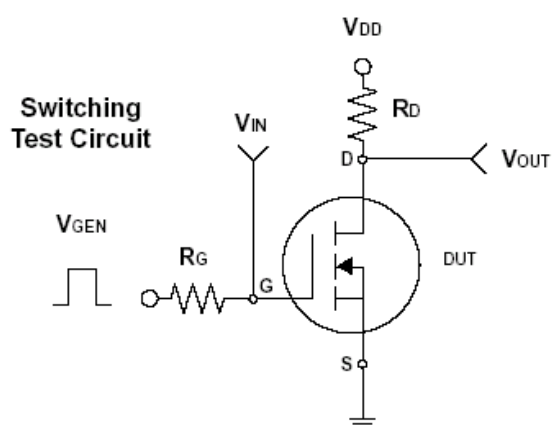
Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted) 25 °C 极限参数和热特性

| Parameter 极限参数 | Symbol 符号 | Limit 范围 | Unit 单位 |
|--|-----------------------------------|------------|---------|
| DrainSource Voltage 漏源电压 | V _{DS} | 60 | V |
| GateSource Voltage 栅源电压 | V _{GS} | ± 20 | |
| Continuous Drain Current 连续漏极电流 | I _D | 6.5 | A |
| Pulsed Drain Current 脉冲漏极电流 | I _{DM} | 30 | |
| Maximum Power Dissipation 最大耗散功率 | P _D | 3.7 | W |
| | | 2.4 | |
| Operating Junction and Storage Temperature Range 使用及储存温度 | T _J , T _{stg} | -55 to 150 | °C |
| JunctiontoAmbient Thermal Resistance (PCB mounted) 结环热阻 | R _{θJA} | 62.5 | °C/W |

ELECTRICAL CHARACTERISTICS 一般电气特性

| Parameter 参数 | 符号 | Test Condition 测试条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---------------------|---|-----|-----|------|----|
| Static 静态参数 | | | | | | |
| DrainSource Breakdown Voltage 漏源击穿电压 | BV _{DSS} | V _{GS} = 0V, I _D = 250uA | 60 | | | V |
| DrainSource OnState Resistance 漏源导通电阻 | R _{DS(on)} | V _{GS} = 4.5V, I _D = 4.7A | | 41 | 52 | mΩ |
| DrainSource OnState Resistance 漏源导通电阻 | R _{DS(on)} | V _{GS} = 10V, I _D = 5.3A | | 33 | 41 | |
| Gate Threshold Voltage 开启电压 | V _{GS(th)} | V _{DS} =V _{GS} , I _D = 250uA | 1 | 1.5 | 3 | V |
| Zero Gate Voltage Drain Current 零栅压漏极电流 | I _{DSS} | V _{DS} = 60V, V _{GS} = 0V | | | 1 | uA |
| Gate Body Leakage 漏极短路时截止栅电流 | I _{GSS} | V _{GS} = ± 20V, V _{DS} = 0V | | | ±100 | nA |
| Forward Transconductance 正向跨导 | g _{fs} | V _{DS} = 15V, I _D = 5.3A | | 10 | — | S |
| Dynamic 动态参数 | | | | | | |
| Total Gate Charge 栅极总电荷 | Q _g | V _{DS} =30V, I _D = 5.3A V _{GS} = 10V | | 22 | | nC |
| GateSource Charge 栅源极电荷 | Q _{gs} | | | 7.1 | | |
| GateDrain Charge 栅漏极电荷 | Q _{gd} | | | 7.5 | | |
| TurnOn Delay Time 导通延迟时间 | t _{d(on)} | V _{DD} = 30V, R _L = 6.8Ω I _D =4.4A, V _{GEN} = 10V R _G = 1Ω | | 13 | | ns |
| TurnOn Rise Time 导通上升时间 | t _r | | | 25 | | |
| TurnOff Delay Time 关断延迟时间 | t _{d(off)} | | | 40 | | |
| TurnOff Fall Time 关断下降时间 | t _f | | | 3.5 | | |
| Input Capacitance 输入电容 | C _{iss} | V _{DS} = 15V, V _{GS} = 0V f = 1.0 MHz | | 930 | | pF |
| Output Capacitance 输出电容 | C _{oss} | | | 72 | | |
| Reverse Transfer Capacitance 反向传输电容 | C _{rss} | | | 80 | | |
| SourceDrain Diode 源漏二极管参数 | | | | | | |
| Max. Diode Forward Current 最大正向电流 | I _S | | | | 3.1 | A |
| Diode Forward Voltage 正向电压 | V _{SD} | I _S = 2.0A, V _{GS} = 0V | | | 1.2 | V |

Note: Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$ 注意: 脉冲测试: 脉冲宽度 $\leq 300\mu s$ 死区 $\leq 2\%$



Typical Characteristics (T_J = 25°C •Noted)

