



汕头华汕电子器件有限公司

N-Channel Enhancement Mode Field Effect Transistor

HFP75N80C

对应国外型号
ME75N80C

■ 主要用途

高速开关应用。DC/DC 转换器及 DC 马达控制等。

■ 极限值 ($T_a=25^{\circ}\text{C}$)

T_{stg} ——贮存温度..... $-55\sim 150^{\circ}\text{C}$

T_j ——结温..... 150°C

V_{DSS} ——漏极—源极电压..... 80V

V_{GS} ——栅极—源极电压..... $\pm 20\text{V}$

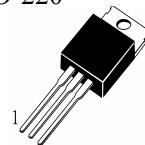
I_{D} ——漏极电流 ($T_c=25^{\circ}\text{C}$) 75A

I_{DM} ——漏极电流(脉冲)(注 1)..... 300A

P_{D} ——耗散功率 ($T_c=25^{\circ}\text{C}$) 75W

■ 外形图及引脚排列

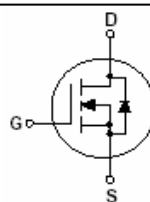
TO-220



1—栅 极 G

2—漏 极 D

3—源 极 S



■ 电参数 ($T_a=25^{\circ}\text{C}$)

参数符号	符 号 说 明	最小值	典型值	最大值	单 位	测 试 条 件
BV_{DSS}	漏—源极击穿电压	80			V	$I_{\text{D}}=250\mu\text{A}, V_{\text{GS}}=0\text{V}$
I_{DSS}	零栅压漏极电流			1	μA	$V_{\text{DS}}=80\text{V}, V_{\text{GS}}=0$
I_{GSS}	栅极泄漏电流			± 100	nA	$V_{\text{GS}}=\pm 20\text{V}, V_{\text{DS}}=0\text{V}$
$V_{\text{GS(th)}}$	栅—源极开启电压	4.0		6.5	V	$V_{\text{DS}}=V_{\text{GS}}, I_{\text{D}}=250\mu\text{A}$
$R_{\text{DS(on)}}$	漏—源极导通电阻			13	m Ω	$V_{\text{GS}}=10\text{V}, I_{\text{D}}=40\text{A}$ (注 2)
C_{iss}	输入电容		7400		pF	$V_{\text{DS}}=20\text{V}, V_{\text{GS}}=0, f=1\text{MHz}$
C_{oss}	输出电容		450		pF	
C_{rss}	反向传输电容		140		pF	
$t_{\text{d(on)}}$	导通延迟时间		80		nS	$V_{\text{DS}}=30\text{V}, V_{\text{GS}}=10\text{V}$ $R_{\text{L}}=15\Omega$ $R_{\text{G}}=10\Omega$ (注 2)
t_{r}	上升时间		37		nS	
$t_{\text{d(off)}}$	断开延迟时间		140		nS	
t_{f}	下降时间		27		nS	$V_{\text{DS}}=60\text{V}$ $V_{\text{GS}}=10\text{V}$ $I_{\text{D}}=75\text{A}$ (注 2)
Q_{g}	栅极总电荷		120		nC	
Q_{gs}	栅极—源极电荷		54		nC	
Q_{gd}	栅极—漏极电荷		38		nC	$f=1\text{MHz}$
R_{g}	栅极阻抗		2.3		Ω	
V_{SD}	源极—漏极二极管导通电压			1.5	V	
$R_{\text{th(j-c)}}$	热阻			2	$^{\circ}\text{C/W}$	结到外壳

*注 1: 漏极电流受最大结温限制。

*注 2: 脉冲测试, 宽度 $\leq 300\mu\text{S}$, 占空比 $\leq 2\%$



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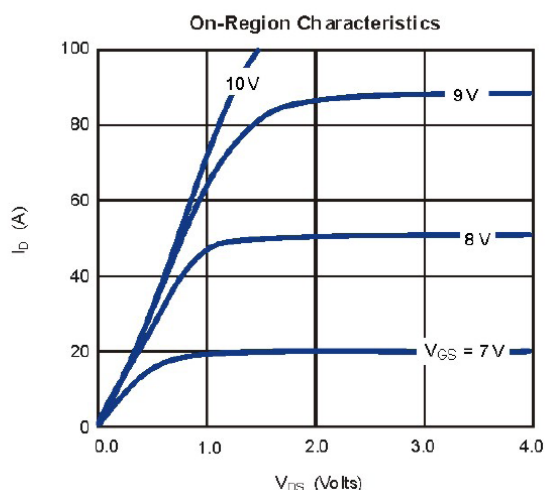
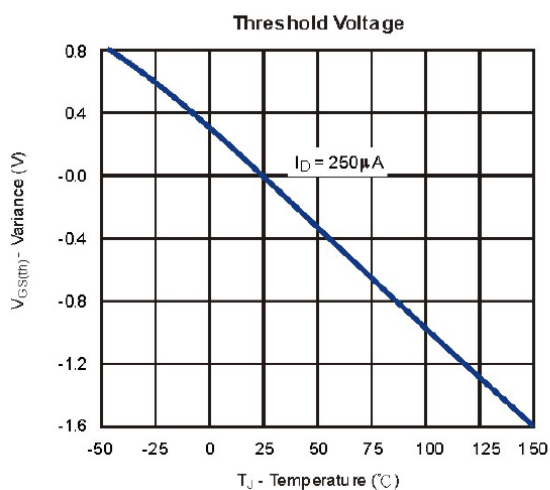
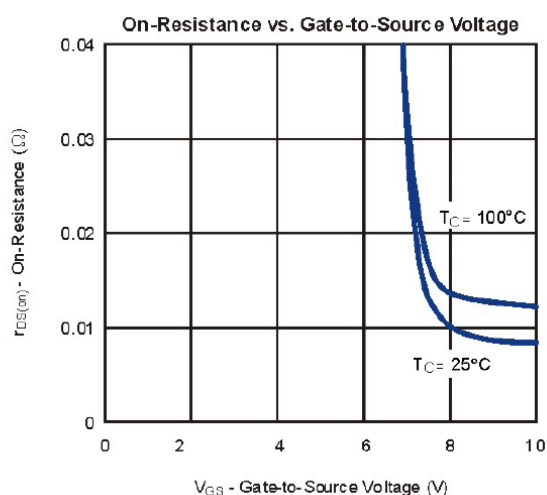
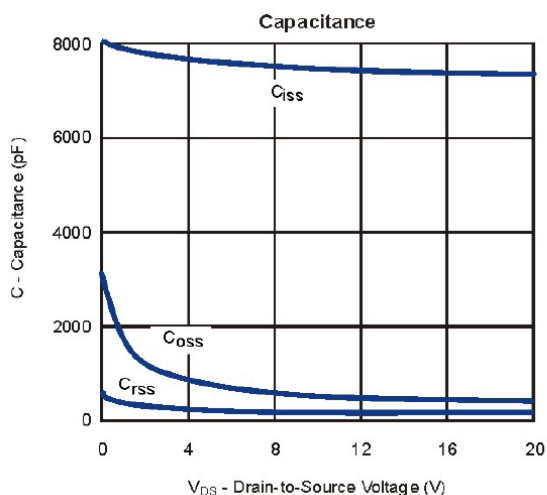
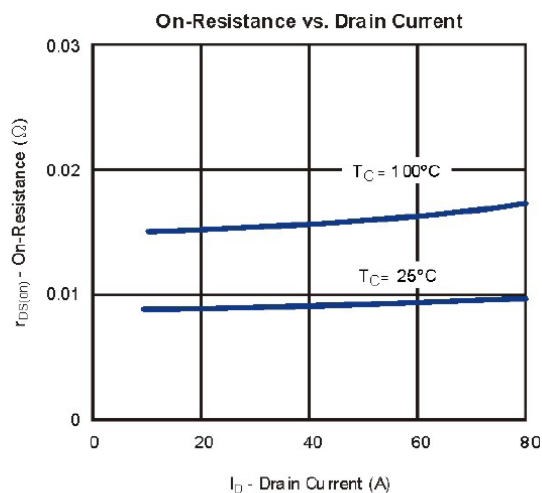
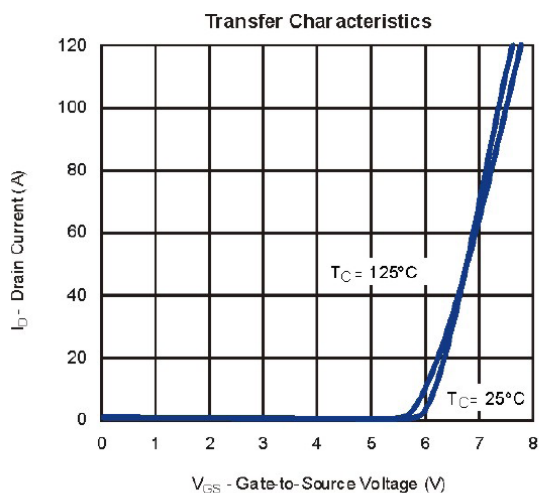
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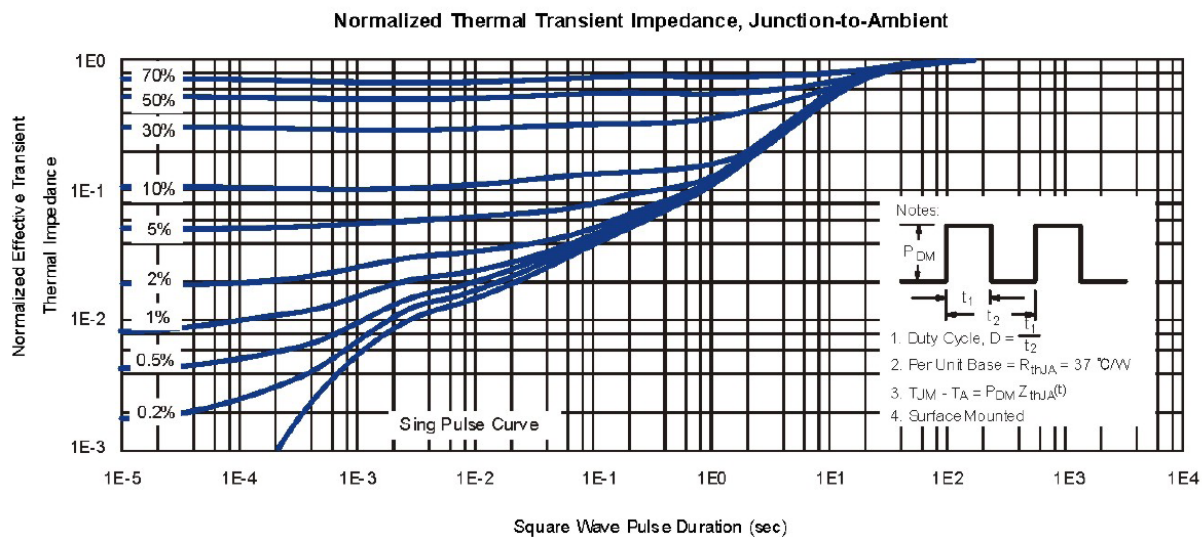
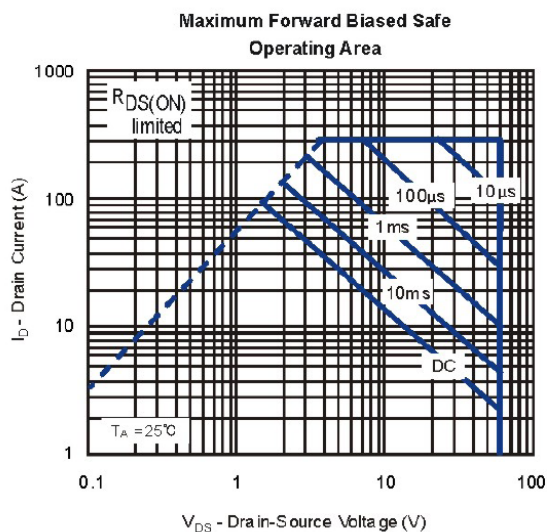
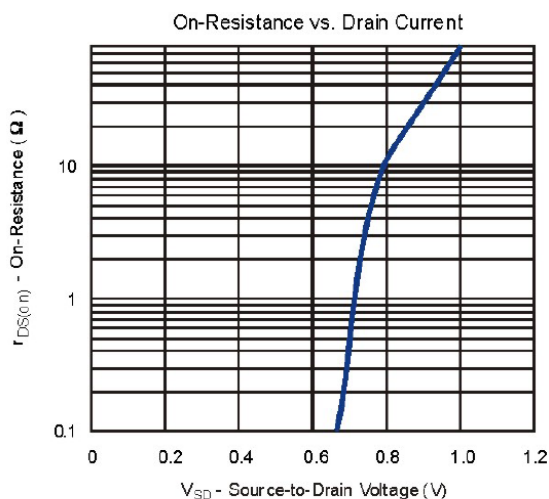
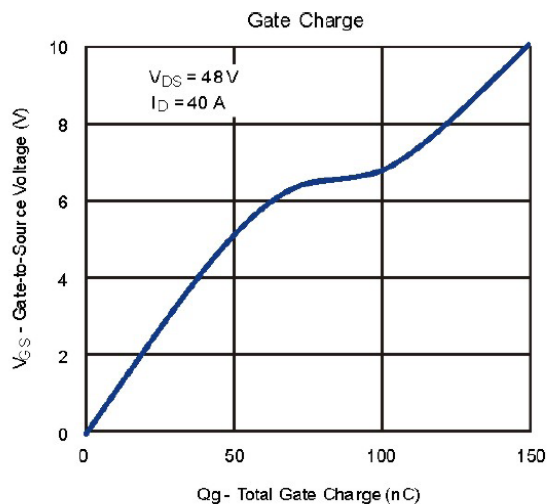
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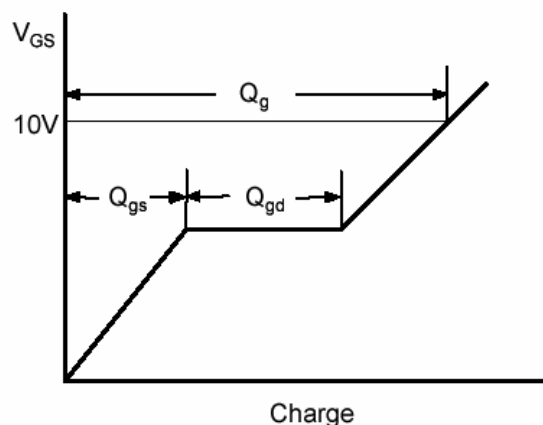
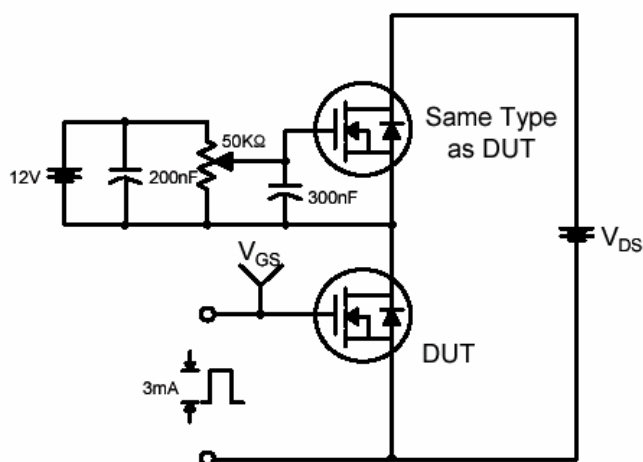
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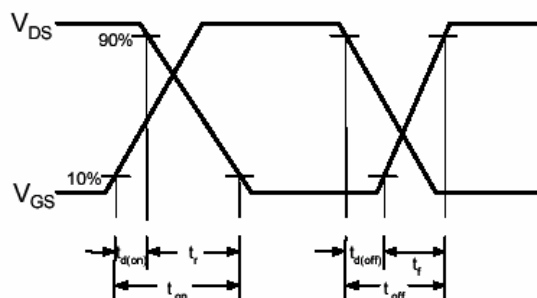
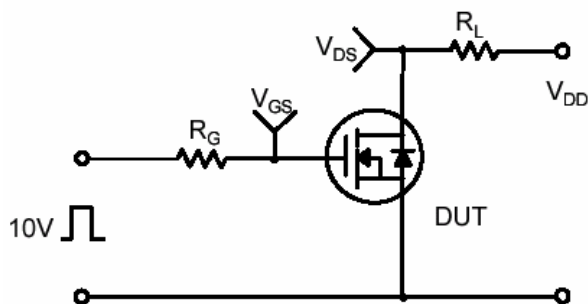
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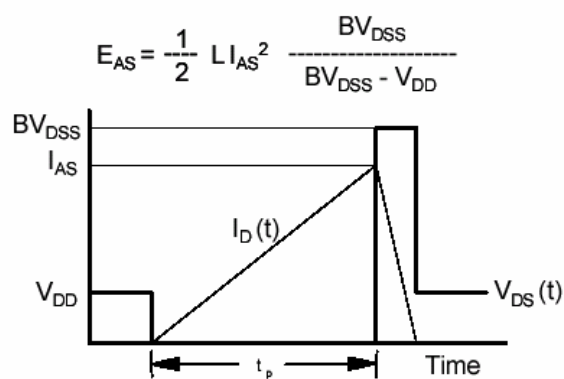
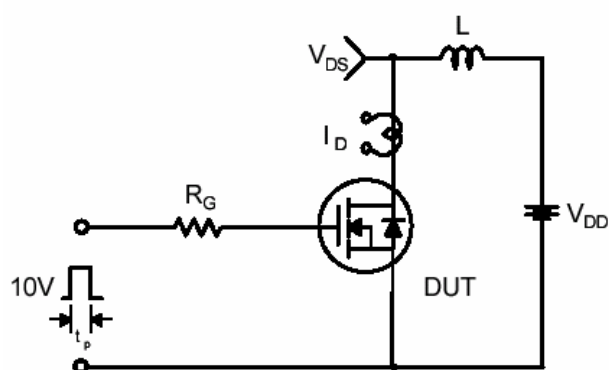
Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms



Unclamped Inductive Switching Test Circuit & Waveforms





■ 特性曲线

Peak Diode Recovery dv/dt Test Circuit & Waveforms

