



# MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>P-MOSFET</b>						
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS}=-16V, V_{GS}=0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS}=\pm 8V, V_{DS}=0V$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.4	-0.7	-1	V
Drain-source on-resistance(note1)	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-2A$		58	100	m $\Omega$
		$V_{GS}=-2.5V, I_D=-2A$		80	135	m $\Omega$
		$V_{GS}=-1.8V, I_D=-1.6A$		120	250	m $\Omega$
Forward transconductance(note1)	$g_{FS}$	$V_{DS}=-5V, I_D=-2A$	2.5			S
Diode forward voltage(note1)	$V_{SD}$	$I_S=-1A, V_{GS}=0V$			-1	V
<b>DYNAMIC PARAMETERS (note 2)</b>						
Input capacitance	$C_{iss}$	$V_{DS}=-10V, V_{GS}=0V, f=1MHz$		531		pF
Output capacitance	$C_{oss}$			91		pF
Reverse transfer capacitance	$C_{rss}$			56		pF
<b>SWITCHING PARAMETERS (note 2)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS}=-4.5V, V_{DD}=-5V,$ $R_G=6\Omega, I_D=-1A$		5.2		ns
Turn-on rise time	$t_r$			13.2		ns
Turn-off delay time	$t_{d(off)}$			13.7		ns
Turn-off fall time	$t_f$			19.1		ns
Total Gate Charge	$Q_g$	$V_{DS}=-10V, V_{GS}=-4.5V,$ $I_D=-2A$		5.5	6.2	nC
Gate-Source Charge	$Q_{gs}$			1.0		nC
Gate-Drain Charge	$Q_{gd}$			1.4		nC
Gate Resistance	$R_g$			8.8		$\Omega$
<b>SCHOTTKY BARRIER DIODE</b>						
Forward voltage	$V_F$	$I_F=0.1A$			0.39	V
		$I_F=1A$			0.55	V
Reverse current	$I_R$	$V_R=30V$			20	$\mu A$
		$V_R=20V$			8	$\mu A$
		$V_R=10V$			4.5	$\mu A$
Junction capacitance	$C_j$	$V_R=5V, f=1MHz$		30		pF

**Note:**

- 1.Pulse test: pulse width =300 $\mu s$ , duty cycle $\leq 2\%$
- 2.These parameters have no way to verify.







