



FMD06N02 20V N-Channel Enhancement-Mode Mosfet

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	20	-	-	V
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = 2.5V, I_D = 5.2A$		34	40	m Ω
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 6A$		24	28	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.6			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate Body Leakage	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 100	nA
Gate Resistance	R_g					
Forward Transconductance	g_{fs}	$V_{DS} = 10V, I_D = 6A$	7	13		S
Dynamic						
Total Gate Charge	Q_g	$V_{DS} = 10V, I_D = 6A$ $V_{GS} = 4.5V$		4.86		nC
Gate-Source Charge	Q_{gs}			0.92		
Gate-Drain Charge	Q_{gd}			1.4		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 10V,$ $I_D = 1A, V_{GEN} = 4.5V$ $R_G = 6\Omega$		8.1		ns
Turn-On Rise Time	t_r			9.95		
Turn-Off Delay Time	$t_{d(off)}$			21.85		
Turn-Off Fall Time	t_f			5.35		
Input Capacitance	C_{iss}	$V_{DS} = 8V, V_{GS} = 0V$ $f = 1.0\text{ MHz}$		562		pF
Output Capacitance	C_{oss}			106		
Reverse Transfer Capacitance	C_{rss}			75		
Source-Drain Diode						
Max. Diode Forward Current	I_S				1.7	A
Diode Forward Voltage	V_{SD}	$I_S = 1.7A, V_{GS} = 0V$			1.2	V

Note: Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$

