

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
V _{(BR)GSS}	Gate Source Breakdown Voltage ¹	I _G = 1.0μA	V _{DS} = 0	40			V
I _{GSS}	Gate Reverse Current	V _{GS} = 20V	V _{DS} = 0			0.1	nA
		V _{GS} = 20V	V _{DS} = 0 T _A = 150°C			0.2	μA
V _{GS}	Gate Source Voltage	V _{DS} = 20V	I _D = 1.0nA	4.0		10	V
V _{GS(f)}	Gate Source Forward Voltage	I _G = 1.0mA	V _{DS} = 0			1.0	V
I _{D(off)}	Drain Cut-off Current	V _{GS} = 12V	V _{DS} = 20V			0.1	nA
		V _{GS} = 12V	V _{DS} = 20V T _A = 150°C			0.2	μA
ON CHARACTERISTICS							
I _{DSS}	Zero Gate voltage Drain Current ¹	V _{GS} = 0V	V _{DS} = 20V	50		150	mA
V _{DS(on)}	Drain Source On-Voltage	I _D = 12mA	V _{GS} = 0			0.4	V
r _{DS(on)}	Static Drain Source On Resistance	I _D = 1.0mA	V _{GS} = 0			30	Ω
ELECTRICAL CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0V	V _{DS} = 20V f = 1.0MHz			14	pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} = 12V	V _{DS} = 0V f = 1.0MHz			3.5	
SMALL SIGNAL CHARACTERISTICS							
r _{ds(on)}	Drain–Source “ON” Resistance	V _{GS} = 0V	I _D = 0 f = 1.0kHz			30	Ω
SWITCHING CHARACTERISTICS							
t _{on}	Turn–On Time	I _{D(on)} = 12mA				15	ns
t _{off}	Turn–Off Time	V _{GS(on)} = 12V				20	
t _r	RiseTime	I _{D(on)} = 12mA				5.0	
t _f	FallTime	V _{GS(off)} = 12V				15	

1) Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%

2) f_t is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.