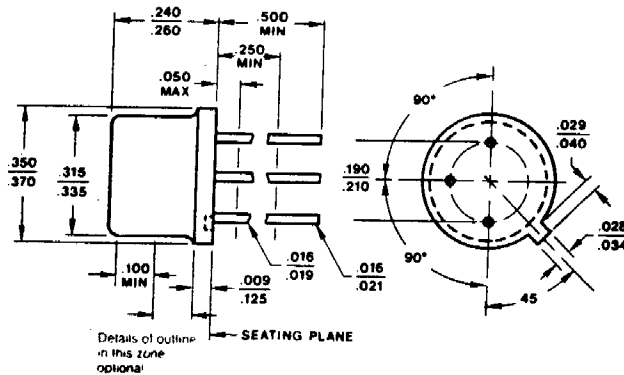


IRFF220

Absolute Maximum Ratings

	Parameter		Units
$I_D @ V_{GS} = 10V, T_C = 25^\circ C$	Continuous Drain Current	3.5	A
$I_D @ V_{GS} = 10V, T_C = 100^\circ C$	Continuous Drain Current	2.25	
I_{DM}	Pulsed Drain Current ①	14	
$P_D @ T_C = 25^\circ C$	Max. Power Dissipation	20	W
	Linear Derating Factor	0.16	W/°C
V_{GS}	Gate-to-Source Voltage	± 20	V
EAS	Single Pulse Avalanche Energy ②	66	mJ
I_{AR}	Avalanche Current ①	—	A
EAR	Repetitive Avalanche Energy ①	—	mJ
dv/dt	Peak Diode Recovery dv/dt ③	5.0	V/ns
T_J	Operating Junction	-55 to 150	°C
T_{STG}	Storage Temperature Range		
	Lead Temperature	300 (0.063 in. (1.6mm) from case for 10s)	
	Weight	0.98(typical)	

TO-39



dim. in in.



Quality Semi-Conductors

IRFF220

Electrical Characteristics @ T_j = 25°C (Unless Otherwise Specified)

	Parameter	Min	Typ	Max	Units	Test Conditions
BV _{DSS}	Drain-to-Source Breakdown Voltage	200	—	—	V	V _{GS} = 0V, I _D = 1.0mA
ΔBV _{DSS} /ΔT _J	Temperature Coefficient of Breakdown Voltage	—	0.25	—	V/°C	Reference to 25°C, I _D = 1.0mA
R _{DSS(on)}	Static Drain-to-Source On-State Resistance	—	—	0.80	Ω	V _{GS} = 10V, I _D = 2.25A ④
		—	—	0.92		V _{GS} = 10V, I _D = 3.5A ④
V _{GS(th)}	Gate Threshold Voltage	2.0	—	4.0	V	V _{DSS} = V _{GS} , I _D = 250μA
g _{fs}	Forward Transconductance	1.5	—	—	S (Ω)	V _{DSS} > 15V, I _{DSS} = 2.25A ④
I _{DSS}	Zero Gate Voltage Drain Current	—	—	25	μA	V _{DSS} = 160V, V _{GS} = 0V
		—	—	250		V _{DSS} = 160V V _{GS} = 0V, T _J = 125°C
I _{GSS}	Gate-to-Source Leakage Forward	—	—	100	nA	V _{GS} = 20V
I _{GSS}	Gate-to-Source Leakage Reverse	—	—	-100		V _{GS} = -20V
Q _g	Total Gate Charge	8.0	—	14.3	nC	V _{GS} = 10V, I _D = 3.5A
Q _{gs}	Gate-to-Source Charge	0.9	—	3.0		V _{DSS} = 100V
Q _{gd}	Gate-to-Drain ('Miller') Charge	2.3	—	9.0		
t _{d(on)}	Turn-On Delay Time	—	—	40	ns	V _{DD} = 100V, I _D = 3.5A, R _G = 7.5Ω
t _r	Rise Time	—	—	50		
t _{d(off)}	Turn-Off Delay Time	—	—	50		
t _f	Fall Time	—	—	50		
L _S + L _D	Total Inductance	—	7.0	—	nH	Measured from drain lead (6mm/0.25in. from package) to source lead (6mm/0.25in. from package)
C _{iss}	Input Capacitance	—	260	—	pF	V _{GS} = 0V, V _{DSS} = 25V f = 1.0MHz
C _{oss}	Output Capacitance	—	100	—		
C _{rss}	Reverse Transfer Capacitance	—	30	—		

