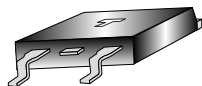
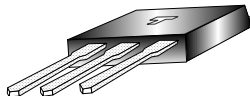


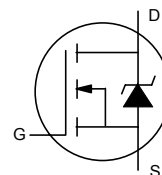
IRF620N



IRF630NS



IRF630NL



Symbol

ELECTRICAL CHARACTERISTICS at $T_j = 25^\circ\text{C}$ Maximum. Unless stated Otherwise						
Parameter	Symbol	Test Conditions	Value			Unit
			Min	Typ	Max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0 V_{DC}$ , $I_D = 250\mu\text{A}$	200	-	-	Volt
Drain to Source Leakage Current	$I_{DSS}$	$V_{DS} = 200V_{DC}$ , $V_{GS} = 0V_{DC}$	-	-	25	$\mu\text{A}$
		$V_{DS} = 160V_{DC}$ , $V_{GS} = 0V_{DC}$ $T_j = 150^\circ\text{C}$	-	-	250	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = +20V_{DC}$	-	-	100	nA
		$V_{GS} = -20V_{DC}$	-	-	-100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$ , $I_D = 250\mu\text{A}$	2.0	-	4.0	Volt
Static Drain to Source On - Resistance	$R_{DS(on)}$	$V_{GS} = 10V_{DC}$ , $I_D = 5.4\text{A}$	-	-	0.30	$\Omega$
Gate Charge	$Q_G$	$I_D = 5.4\text{A}$	-	-	35	nC
Gate to Source Charge	$Q_{GS}$	$V_{DS} = 160V_{DC}$ , $V_{GS} = 10V_{DC}$	-	-	6.5	nC
Gate to Drain Charge	$Q_{GD}$	$V_{DS} = 160V_{DC}$ , $V_{GS} = 10V_{DC}$	-	-	17	nC
Input Capacitance	$C_{ISS}$	$V_{DS} = 25V_{DC}$ , $V_{GS} = 0V_{DC}$ , $f = 1.0\text{MHz}$	-	575	-	pF
Output Capacitance	$C_{OSS}$		-	89	-	pF
Transfer Capacitance	$C_{RSS}$		-	25	-	pF
Turn On Delay Time	$t_{d(on)}$	$V_{DD} = 100V_{DC}$ , $I_D = 4.8\text{A}$ , $R_G = 18\Omega$ , $R_D = 20\Omega$	-	7.9	-	nS
Turn Off Delay Time	$t_{d(off)}$		-	27	-	nS
Rise Time	$t_r$		-	14	-	nS
Fall Time	$t_f$		-	15	-	nS
Continuous Source Current	$I_S$		-	-	9.3	A
Pulsed Source Current	$I_{SM}$		-	-	37	A
Forward Voltage (Diode)	$V_{SD}$	$V_{GS} = 0V_{DC}$ , $I_S = 5.4\text{A}$ , $T_p = 300\mu\text{S}$	-	-	1.3	V

MAXIMUM RATINGS ( $T_j = 25^\circ\text{C}$ unless stated otherwise)				
Parameter	Symbol	Condition	Value	Unit
Gate to Source Voltage	$V_{GS}$		+/- 20V	Volt
Drain to Source Voltage	$V_{DSS}$		200	Volt
Continuous Drain Current	$I_D$		9.3	Amp
Pulsed Drain Current	$I_{DM}$	-	37	Amp
Total Power Dissipation	$P_D$	( $T_A = 25^\circ\text{C}$ )	82	W
Thermal Resistance (Junction to Ambient)	$R_{TH (J-A)}$		62	$^\circ\text{C/W}$

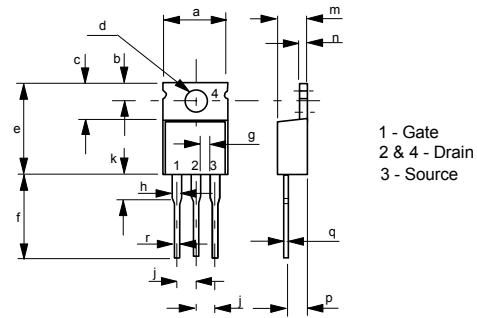
Maximum Operating Temperature Range ( $T_j$ ) -55 to +175 C



### Mechanical Dimensions

Case TO-220-AB Plastic

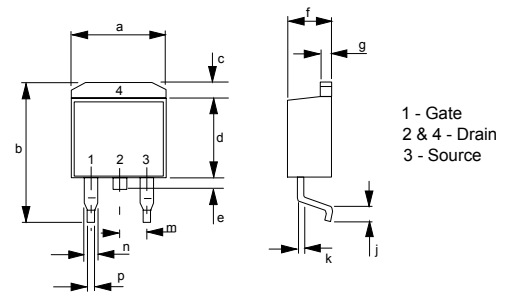
Dim	Millimetres		Inches	
	Min	Max	Min	Max
a	10.29	10.54	0.405	0.415
b	2.62	2.87	0.103	0.113
c	6.10	6.47	0.240	0.255
d	3.54	3.78	0.139	0.149
e	14.84	15.24	0.584	0.600
f	13.47	14.09	0.530	0.555
g	1.15		0.045	
h	1.15	1.400	0.045	0.055
j		2.54		0.100
k	3.550	4.06	0.140	0.160
m	4.20	4.69	0.165	0.185
n	1.22	1.32	0.048	0.052
p	2.64	2.92	0.104	0.115
q	0.48	0.55	0.018	0.022
r	0.69	0.93	0.027	0.037



### Mechanical Dimensions

Case SMB 220 Plastic

Dim	Millimetres		Inches	
	Min	Max	Min	Max
a	9.85	10.67	0.380	0.420
b	14.61	15.88	0.575	0.625
c		1.65		0.065
d	8.51	9.65	0.335	0.380
e	1.27	1.78	0.050	0.070
f	4.08	4.83	0.160	0.190
g	1.14	1.40	0.045	0.055
h	1.15	1.400	0.045	0.055
j	1.78	2.79	0.070	0.110
k	0.38	0.77	0.015	0.029
m		2.54 Pitch		0.10 Pitch
n	0.51	0.99	0.020	0.038
p	0.51	0.89	0.020	0.35



### Mechanical Dimensions

Case TO262 Plastic

Dim	Millimetres		Inches	
	Min	Max	Min	Max
a	10.29	10.54	0.405	0.415
b	9.91	10.54	0.390	0.415
c	13.47	14.09	0.530	0.555
d	1.15		0.045	
e	1.15	1.40	0.045	0.055
f	0.69	0.93	0.027	0.037
g		2.54 Pitch		0.10 Pitch
h	4.20	4.69	0.165	0.185
j	1.22	1.32	0.048	0.052
k	0.46	0.55	0.018	0.022
m	2.64	2.92	0.104	0.115
n	3.55	4.06	0.140	0.160

