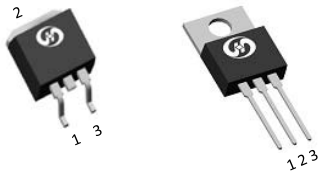
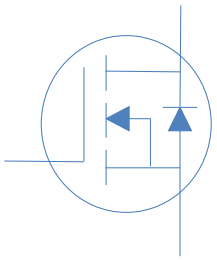
V_{DS}		150	V
R	TO-263	15.7	mΩ
R	TO-220	16	mΩ
$I_{D\ (Sillicon\ Limited)}$		80	A
$I_{D\ (Package\ Limited)}$		120	A





Part Number	Package	Marking
HGB190N15S	TO-263	GB190N15S
HGP190N15S	TO-220	GP190N15S

Absolute Maximum Ratings at T_j

Parameter	Symbol	Conditions	Value	Unit
Continuous Drain Current (Silicon Limited)	I_D	T_C	80	A
		T_C	56	
Continuous Drain Current (Package Limited)		T_C	120	
Drain to Source Voltage	V_{DS}	-	150	V
Gate to Source Voltage	V_{GS}	-	±20	V
Pulsed Drain Current	I_{DM}	-	240	A
	$_{AS}$	L=0.3mH, T_C	184	mJ
	P_D	T_C	214	
	T_J, T_{stg}	-	-55 to 175	

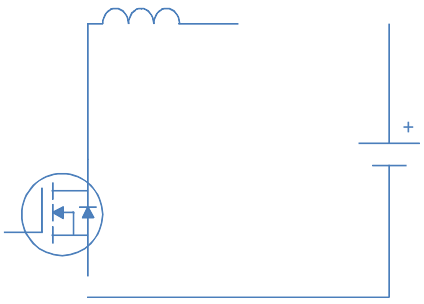
Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
	$R_{\theta JC}$	0.7	
	$R_{\theta JA}$	60	

	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250μA		150	-	-	
	V					4	
Zero Gate Voltage Drain Current	I_{DSS}	V_{GS}=0V, V_{DS}=150V, T_j		-	-	1	μA
		V_{GS}=0V, V_{DS}=150V, T_j		-	-	100	
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V		-	-	±100	nA
Drain to Source on Resistance	$R_{DS(on)}$	V_{GS}=10V, I_D=20A	TO-263	-	15.7	18.7	mΩ
	$R_{DS(on)}$	V_{GS}=10V, I_D=20A	TO-220	-	16	19	
Transconductance	g	V_{DS}=5V, I_D=20A		-	50	-	S
Gate Resistance	R_G	V_{GS}=0V, V_{DS}		-	3.5	-	Ω

	C_{iss}		-	2275	-	
	C_{oss}	V_{GS}=0V, V_{DS}	-	165	-	
	C_{rss}		-	5.5	-	
	Q_g		-	27	-	
	Q_{gs}	V_{DD}=75V, I_D=20A, V_{GS}=10V	-	9	-	nC
	Q_{gd}		-	2	-	
Turn on Delay Time	$t_{d(on)}$		-	10	-	
Rise time	t_r	V_{DD}=75V, I_D=20A, V_{GS}=10V,	-	29	-	ns
	t	R_G=10Ω,	-	16	-	
	t		-	15	-	

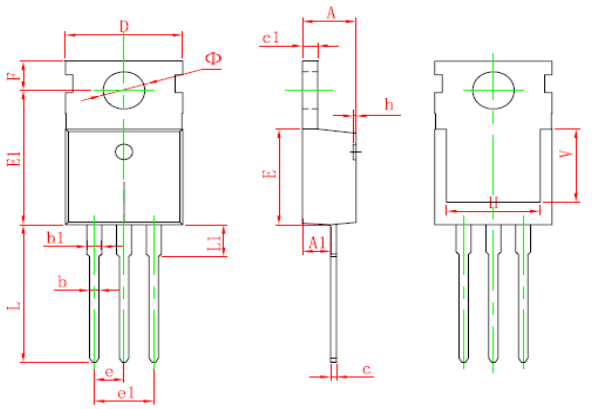
	V_{SD}	V_{GS}=0V, I =20A		-	0.9	1.2	V
Reverse Recovery Time	t_{rr}	V_R=75V, I =20A, dI	μs	-	90	-	ns
	Q_{rr}			-	234	-	nC



Diode Recovery Test	

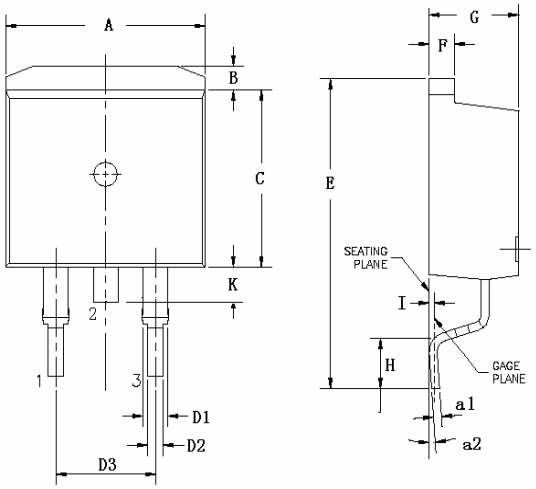
Package Outline

TO-220, 3 leads



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.400	4.600	0.173	0.181
A1	2.250	2.550	0.089	0.100
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.330	0.650	0.013	0.026
c1	1.200	1.400	0.047	0.055
D	9.910	10.250	0.390	0.404
E	8.950	9.750	0.352	0.384
E1	12.650	13.050	0.498	0.514
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
F	2.650	2.950	0.104	0.116
H	7.900	8.100	0.311	0.319
h	0.000	0.300	0.000	0.012
L	12.900	13.400	0.508	0.528
L1	2.850	3.250	0.112	0.128
V	6.900 REF		0.276 REF	
Φ	3.400	3.800	0.134	0.150

TO-263, 2 leads



Symbol	Min	Nom	Max
A	9.66	9.97	10.28
B	1.02	1.17	1.32
C	8.59	9.00	9.40
D1	1.14	1.27	1.40
D2	0.70	0.83	0.95
D3		5.08	
	15.09	15.24	15.39
	1.15	1.28	1.40
G	4.30	4.50	4.70
H	2.29	2.54	2.79
I		0.25	
K	1.30	1.45	1.60
a1	0.45	0.55	0.65
a2(degree)	0°		8°