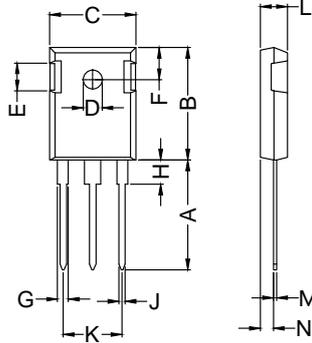
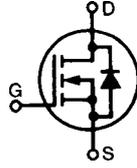
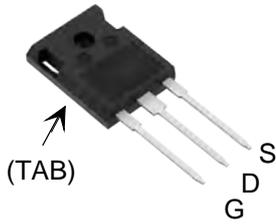


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Power MOSFETs



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.18	0.065	0.086
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

Gate, D=Drain,
S=Source, TAB=Drain



Symbol	Test Conditions	Maximum Ratings	Unit
V _{DSS}	T _J =25°C to 150°C	500	V
V _{DGR}	T _J =25°C to 150°C; R _{GS} =1MΩ	500	
V _{GS}	Continuous	±20	V
V _{GSM}	Transient	±30	
I _{D25}	T _C =25°C	21	A
I _{DM}	T _C =25°C; pulse width limited by T _{JM}	84	A
I _{AR}	T _C =25°C	21	A
E _{AR}	T _C =25°C	30	mJ
dv/dt	I _S ≤ I _{DM} ; di/dt ≤ 100A/us; V _{DD} ≤ V _{DSS} T _J ≤ 150°C; R _G =2Ω	5	V/ns
P _D	T _C =25°C	300	W
T _J		-55...+150	°C
T _{JM}		150	
T _{stg}		-55...+150	
T _L	1.6mm(0.062 in.) from case for 10s	300	°C
M _d	Mounting torque	1.13/10	Nm/lb.in.
Weight	typical	6	g

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(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values			Unit
		min.	typ.	max.	
V _{DSS}	V _{GS} =0V; I _D =250μA	500			V
V _{GS(th)}	V _{DS} =V _{GS} ; I _D =4mA	2		4	V
I _{GSS}	V _{GS} =±20VDC; V _{DS} =0			±100	nA
I _{DSS}	V _{DS} =0.8V _{DSS} ; T _J =25°C			200	μA
	V _{GS} =0V; T _J =125°C			1	mA

(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values			Unit
		min.	typ.	max.	
R _{DS(on)}	V _{GS} =10V; I _D =0.5I _{D25} Pulse test, t _s ≤300μs, duty cycle≤2%			0.25	Ω
g _{ts}	V _{DS} =10V; I _D =0.5I _{D25} ; pulse test	11	21		S
C _{ies}	V _{GS} =0V; V _{DS} =25V; f=1MHz		4200		pF
C _{oes}			450		
C _{res}			135		
Q _{g(on)}	V _{GS} =10V; V _{DS} =0.5V _{DSS} ; I _D =0.5I _{D25}		135	160	nC
Q _{gs}			28	40	
Q _{gd}			62	85	
t _{d(on)}	V _{GS} =10V; V _{DS} =0.5V _{DSS} ; I _D =0.5I _{D25} R _G =2Ω(External)		16	25	ns
t _r			33	45	ns
t _{d(off)}			65	80	ns
t _f			30	40	ns
R _{thJC}				0.44	K/W
R _{thCK}			0.27		K/W

Source-Drain Diode

(T_J=25°C, unless otherwise specified)

Symbol	Test Conditions	Characteristic Values			Unit
		min.	typ.	max.	
I _S	V _{GS} =0V			21	A
I _{SM}	Repetitive; pulse width limited by T _{JM}			84	A
V _{SD}	I _F =I _S ; V _{GS} =0V; Pulse test, t _s ≤300μs, duty cycle d≤2%			1.5	V
t _{rr}	I _F =I _S ; -di/dt=100A/μs; V _R =100V;			250	ns
		T _J =25°C			400
Q _{RM}			1		μC
		T _J =25°C		2	
I _{RM}			10		A
		T _J =125°C		15	A

Sirectifier[®]

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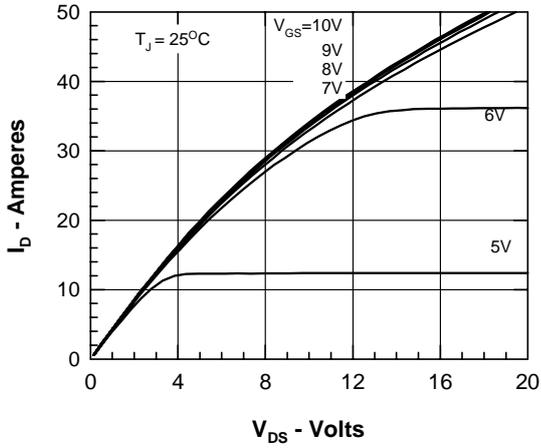


Figure 1. Output Characteristics at 25°C

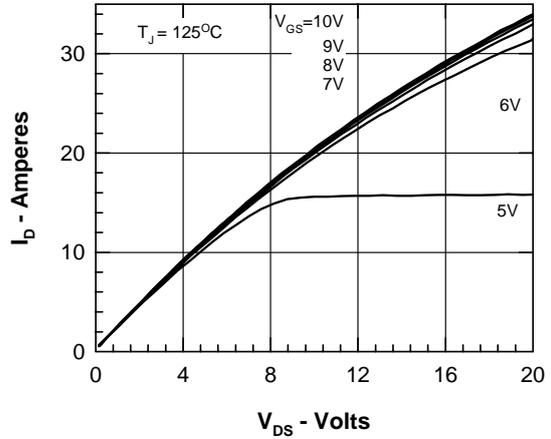


Figure 2. Output Characteristics at 125°C

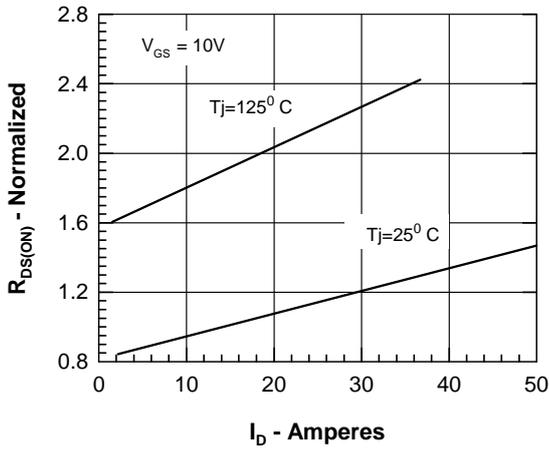


Figure 3. $R_{DS(on)}$ normalized to value at $I_D = 12A$

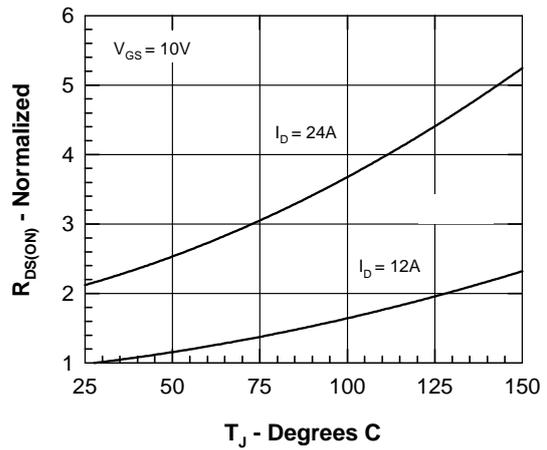


Figure 4. $R_{DS(on)}$ normalized to value at $I_D = 12A$

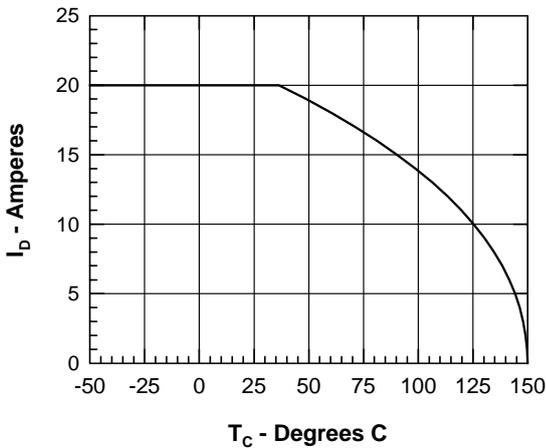


Figure 5. Drain Current vs. Case Temperature

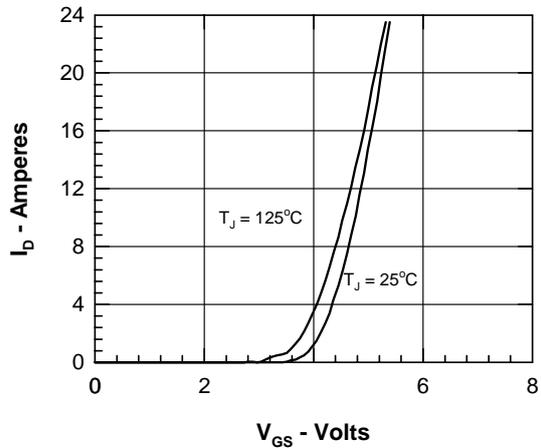


Figure 6. Admittance Curves

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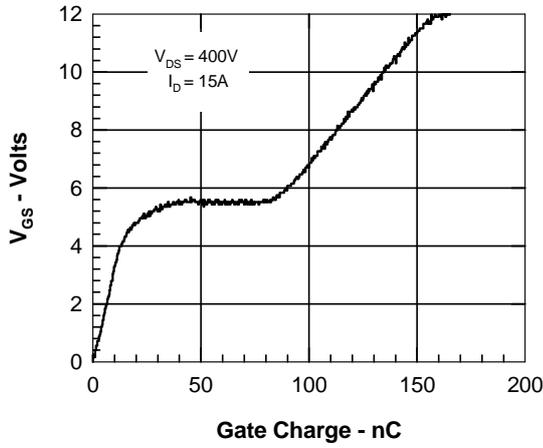


Figure 7. Gate Charge

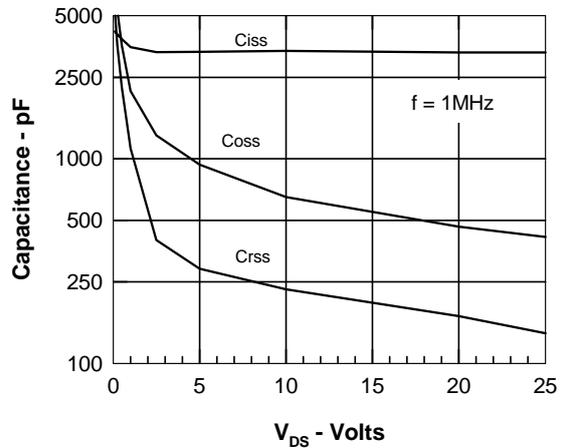


Figure 8. Capacitance Curves

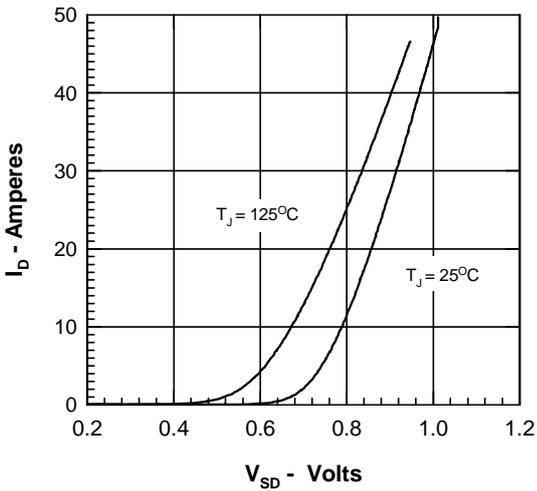


Figure 9. Source Current vs. Source to Drain Voltage

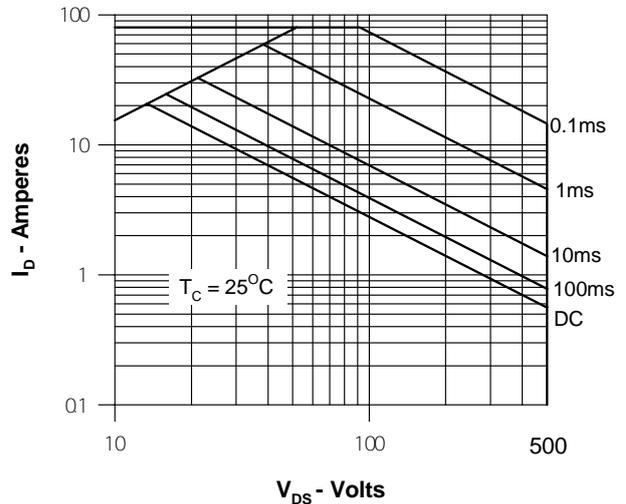


Figure 10. Forward Bias Safe Operating Area

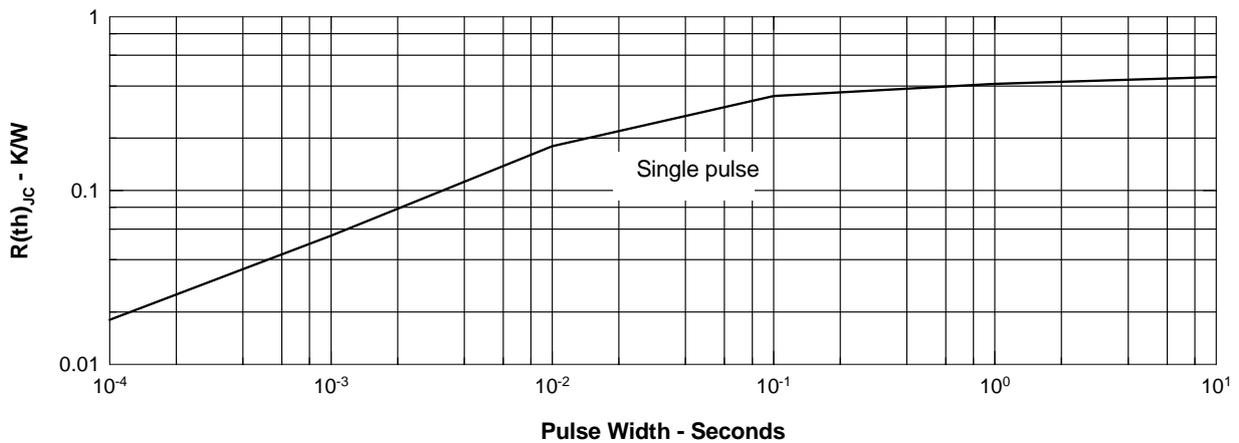


Figure 11. Transient Thermal Resistance

