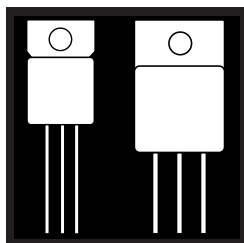


OM60N06SA OM60N05SA OM50N06ST
 OM50N06SA OM50N05SA OM50N05ST

LOW VOLTAGE, LOW $R_{DS(on)}$ POWER MOSFETS IN HERMETIC ISOLATED PACKAGE



**50V And 60V Ultra Low $R_{DS(on)}$
 Power MOSFETs In TO-257 And TO-254
 Isolated Packages**

FEATURES

- Isolated Hermetic Metal Packages
- Ultra Low $R_{DS(on)}$
- Low Conductive Loss/Low Gate Charge
- Available Screened To MIL-S-19500, TX, TXV And S Levels
- Ceramic Feedthroughs Available

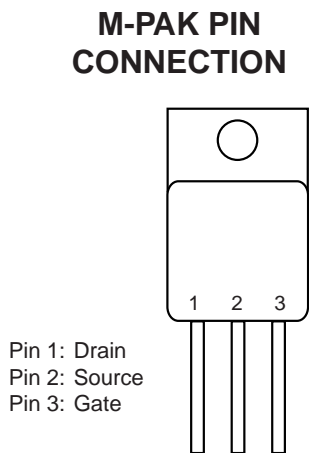
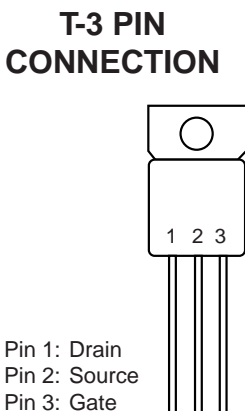
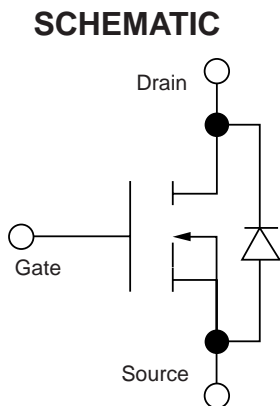
DESCRIPTION

This series of hermetic packaged MOSFETs are ideally suited for low voltage applications; battery powered voltage power supplies, motor controls, dc to dc converters and synchronous rectification. The low conduction loss allows smaller heat sinking and the low gate charge simpler drive circuitry.

MAXIMUM RATINGS (Per Device)

PART NO.	V_{DS} (V)	$R_{DS(on)}$ ()	I_D (A)	Package
OM60N06SA	60	.025	60	TO-254AA
OM50N06SA	60	.030	50	TO-254AA
OM50N06ST	60	.035	50	TO-257AA
OM60N05SA	50	.025	60	TO-254AA
OM50N05SA	50	.030	50	TO-254AA
OM50N05ST	50	.035	50	TO-257AA

3.1



OM60N06SA - OM50N05ST

ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	60N06SA	50N06ST 50N05SA	60N05SA	50N05ST 50N05SA	Units
V_{DS}	60	60	50	50	V
V_{DGR}	60	60	50	50	V
$I_D @ T_C = 25^\circ\text{C}$	55	50	55	50	A
$I_D @ T_C = 100^\circ\text{C}$	37	33	37	33	A
I_{DM}	220	200	220	200	A
$P_D @ T_C = 25^\circ\text{C}$	100	100	100	100	W
$P_D @ T_C = 100^\circ\text{C}$	40	40	40	40	W
Junction-To-Case	.80	.80	.80	.80	$W/^\circ\text{C}$
T_J	-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
T_{stg}	-55 to 150	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Lead Temperature (1/16" from case for 10 secs.)	300	300	300	300	$^\circ\text{C}$

1 Pulse Test: Pulse width 300 μsec . Duty Cycle 1.5%.

2 Package Limited SA $I_o = 25\text{ A}$, SC SC $I_o = 35\text{ A}$ @ 25°C

THERMAL RESISTANCE

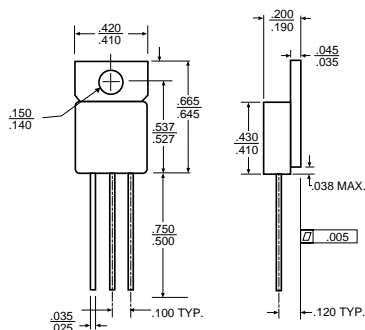
R_{thJC}	Junction-to-Case	1.25	$^\circ\text{C/W}$
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PACKAGE LIMITATIONS

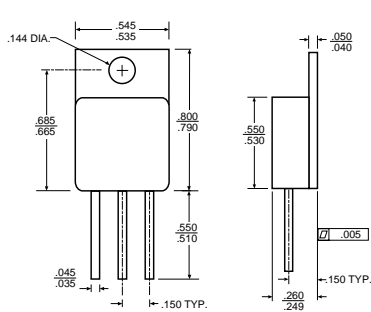
Parameters	TO254AA	TO-257AA	Unit
I_D	25	15	A
Linear Derating Factor, Junction-to-Ambient	.020	.015	$W/^\circ\text{C}$
R_{thJA}	50	65	$^\circ\text{C/W}$
Linear Derating, Junction-to-Case	0.8	0.8	$W/^\circ\text{C}$

3.1

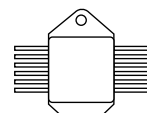
T-3 MECHANICAL OUTLINE



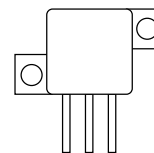
M-PAK MECHANICAL OUTLINE



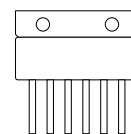
PACKAGE OPTIONS



MOD PAK



Z-TAB



6 PIN SIP

Notes:

- Standard Products are supplied with glass feedthroughs. For ceramic feedthroughs, add the letter "C" to the part number. Example - OMXXXXCSA.
- MOSFETs are also available in Z-Pak, dual and quad pak styles. Please call the factory for more information.

OM60N06SA (T_C = 25°C unless otherwise specified)

Avalanche Characteristics	Min.	Typ.	Max.	Units	Test Conditions
I _{AR} Avalanche Current		55		A	(repetitive or non-repetitive, T _J = 25°C)
E _{AS} Single Pulse Avalanche Energy		520		mJ	(starting T _J = 25°C, I _b = I _{AR} , V _{DO} = 25 V)
E _{ARR} Repetitive Avalanche Energy		130		mJ	(pulse width limited by T _{J,max} , d < 1%)
I _{AR} Avalanche Current		34		A	(repetitive or non-repetitive, T _J = 100°C)
Electrical Characteristics - OFF					
V _{DRSS} Drain-Source Breakdown Voltage	60			V	I _b = 250 μA, V _{GS} = 0
I _{DSS} Zero Gate Voltage Drain Current (V _{GS} = 0)		250		μA	V _{DS} = Max. Rat.
I _{GSS} Gate-Body Leakage Current (V _{DS} = 0)		1000		μA	V _{GS} = Max. Rat. x 0.8, T _C = 125°C
		±100		nA	V _{GS} = ±20 V
Electrical Characteristics - ON*					
V _{GS(th)} Gate Threshold Voltage	2	4		V	V _{DS} = V _{GS} , I _b = 250 μA
R _{DS(on)} Static Drain-Source On Resistance		.025			V _{GS} = 10 V, I _b = 30 A
		.050			T _C = 100°C
I _{DM(on)} On State Drain Current	55			A	V _{DS} > I _{DM(on)} x R _{DS(on)max} , V _{GS} = 10 V
Electrical Characteristics - Dynamic					
g _{fs} Forward Transconductance	16			S	V _{DS} > I _{DM(on)} x R _{DS(on)max} , I _b = 30 A
C _{iss} Input Capacitance		2500		pF	V _{DS} = 25 V
C _{oss} Output Capacitance		950		pF	V _{GS} = 0
C _{res} Reverse Transfer Capacitance		250		pF	f = 1 MHz
Electrical Characteristics - Switching On					
T _{d(on)} Turn-On Time		110		nS	V _{DO} = 25 V, I _b = 55 A
t _r Rise Time		300		nS	R _G = 50 , V _{GS} = 10 V
(di/dt) _{on} Turn-On Current Slope		160		A/μS	V _{DO} = 40 V, I _b = 55 A
		65		nC	R _G = 50 , V _{GS} = 10 V
Q _g Total Gate Charge				nC	V _{DO} = 25 V, I _b = 30 A, V _{GS} = 10 V
Electrical Characteristics - Switching Off					
T _{d(off)} Off Voltage Rise Time		160		nS	V _{DO} = 40 V, I _b = 55 A
t _f Fall Time		160		nS	R _G = 50 , V _{GS} = 10 V
t _{cross} Cross-Over Time		320		nS	
Electrical Characteristics - Source Drain Diode					
I _{SD} Source Drain Current		55		A	
I _{SDM} * Source Drain Current (pulsed)		200		A	
V _{SD} Forward On Voltage		1.6		V	I _{SD} = 55 A, V _{GS} = 0
t _r Reverse Recovery Time		100		nS	I _{SD} = 55 A, di/dt = 100 A/μs
Q _r Reverse Recovery Charge		.25		μC	V _R = 25 V, T _J = 150°C
I _{RRM} Reverse Recovery Current		5		A	

*Pulsed: Pulse Duration 300μS, Duty Cycle 1.5%.

OM50N06SA (T_C = 25°C unless otherwise specified)

Avalanche Characteristics	Min.	Typ.	Max.	Units	Test Conditions
I _{AR} Avalanche Current		50		A	(repetitive or non-repetitive, T _J = 25°C)
E _{AS} Single Pulse Avalanche Energy		400		mJ	(starting T _J = 25°C, I _b = I _{AR} , V _{DO} = 25 V)
E _{ARR} Repetitive Avalanche Energy		100		mJ	(pulse width limited by T _{J,max} , d < 1%)
I _{AR} Avalanche Current		30		A	(repetitive or non-repetitive, T _J = 100°C)
Electrical Characteristics - OFF					
V _{DRSS} Drain-Source Breakdown Voltage	60			V	I _b = 250 μA, V _{GS} = 0
I _{DSS} Zero Gate Voltage Drain Current (V _{GS} = 0)		250		μA	V _{DS} = Max. Rat.
I _{GSS} Gate-Body Leakage Current (V _{DS} = 0)		1000		μA	V _{GS} = Max. Rat. x 0.8, T _C = 125°C
		±100		nA	V _{GS} = ±20 V
Electrical Characteristics - ON*					
V _{GS(th)} Gate Threshold Voltage	2	4		V	V _{DS} = V _{GS} , I _b = 250 μA
R _{DS(on)} Static Drain-Source On Resistance		.028			V _{GS} = 10 V, I _b = 25 A
		.056			T _C = 100°C
I _{DM(on)} On State Drain Current	50			A	V _{DS} > I _{DM(on)} x R _{DS(on)max} , V _{GS} = 10 V
Electrical Characteristics - Dynamic					
g _{fs} Forward Transconductance	17			S	V _{DS} > I _{DM(on)} x R _{DS(on)max} , I _b = 25 A
C _{iss} Input Capacitance		2000		pF	V _{DS} = 25 V
C _{oss} Output Capacitance		1000		pF	V _{GS} = 0
C _{res} Reverse Transfer Capacitance		300		pF	f = 1 MHz
Electrical Characteristics - Switching On					
T _{d(on)} Turn-On Time		45		nS	V _{DO} = 25 V, I _b = 29 A
t _r Rise Time		90		nS	R _G = 4.7 , V _{GS} = 10 V
(di/dt) _{on} Turn-On Current Slope		200		A/μS	V _{DO} = 40 V, I _b = 50 A
		45		nC	R _G = 50 , V _{GS} = 10 V
Q _g Total Gate Charge				nC	V _{DO} = 40 V, I _b = 50 A, V _{GS} = 10 V
Electrical Characteristics - Switching Off					
T _{d(off)} Off Voltage Rise Time		160		nS	V _{DO} = 40 V, I _b = 50 A
t _f Fall Time		90		nS	R _G = 50 , V _{GS} = 10 V
t _{cross} Cross-Over Time		250		nS	
Electrical Characteristics - Source Drain Diode					
I _{SD} Source Drain Current		50		A	
I _{SDM} * Source Drain Current (pulsed)		200		A	
V _{SD} Forward On Voltage		2		V	I _{SD} = 50 A, V _{GS} = 0
t _r Reverse Recovery Time		150		nS	I _{SD} = 50 A, di/dt = 100 A/μs
Q _r Reverse Recovery Charge		0.2		μC	V _R = 30 V, T _J = 150°C
I _{RRM} Reverse Recovery Current		4		A	

*Pulsed: Pulse Duration 300μS, Duty Cycle 1.5%.

OM50N06ST ($T_C = 25^\circ\text{C}$ unless otherwise specified)

OM60N05SA ($T_C = 25^\circ\text{C}$ unless otherwise specified)

Avalanche Characteristics		Min.	Typ.	Max.	Units	Test Conditions
I_{AR}	Avalanche Current			50	A	(repetitive or non-repetitive, $T_j = 25^\circ\text{C}$)
E_{AS}	Single Pulse Avalanche Energy			400	mJ	(starting $T_j = 25^\circ\text{C}$, $I_D = I_{AR}$, $V_{DD} = 25\text{V}$)
E_{AR}	Repetitive Avalanche Energy			100	mJ	(pulse width limited by $T_{j,max}$, $d < 1\%$)
I_{AR}	Avalanche Current			30	A	(repetitive or non-repetitive, $T_j = 100^\circ\text{C}$)
Electrical Characteristics - OFF						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	60			V	$I_D = 250\ \mu\text{A}$, $V_{GS} = 0$
I_{DSS}	Zero Gate Voltage Drain Current ($V_{GS} = 0$)			250 1000	μA	$V_{DS} = \text{Max. Rat.}$ $V_{DS} = \text{Max. Rat.} \times 0.8$, $T_C = 125^\circ\text{C}$
I_{GSS}	Gate-Body Leakage Current ($V_{DS} = 0$)			± 100	nA	$V_{GS} = \pm 20\text{V}$
Electrical Characteristics - ON*						
$V_{GS(th)}$	Gate Threshold Voltage	2		4	V	$V_{DS} = V_{GS}$, $I_D = 250\ \mu\text{A}$
$R_{DS(on)}$	Static Drain-Source On Resistance			.033 .066		$V_{GS} = 10\text{V}$, $I_D = 25\text{A}$ $T_C = 100^\circ\text{C}$
$I_{D(on)}$	On State Drain Current	50			A	$V_{DS} > I_{D(on)} \times R_{DS(on)max}$, $V_{GS} = 10\text{V}$
Electrical Characteristics - Dynamic						
g_{fs}	Forward Transconductance	17			S	$V_{DS} > I_{D(on)} \times R_{DS(on)max}$, $I_D = 25\text{A}$
C_{iss}	Input Capacitance		2000		pF	$V_{DS} = 25\text{V}$
C_{oss}	Output Capacitance		1000		pF	$V_{GS} = 0$
C_{res}	Reverse Transfer Capacitance		300		pF	$f = 1\text{MHz}$
Electrical Characteristics - Switching On						
$T_{d(on)}$	Turn-On Time		45		nS	$V_{DD} = 25\text{V}$, $I_D = 29\text{A}$
t_r	Rise Time		90		nS	$R_G = 4.7$, $V_{GS} = 10\text{V}$
$(di/dt)_{on}$	Turn-On Current Slope		200		A/ μS	$V_{DD} = 40\text{V}$, $I_D = 50\text{A}$ $R_G = 50$, $V_{GS} = 10\text{V}$
Q_g	Total Gate Charge		45		nC	$V_{DD} = 40\text{V}$, $I_D = 50\text{A}$, $V_{GS} = 10\text{V}$
Electrical Characteristics - Switching Off						
$T_{r(voff)}$	Off Voltage Rise Time		160		nS	$V_{DD} = 40\text{V}$, $I_D = 50\text{A}$
t_f	Fall Time		90		nS	$R_G = 50$, $V_{GS} = 10\text{V}$
t_{cross}	Cross-Over Time		250		nS	
Electrical Characteristics - Source Drain Diode						
I_{SD}	Source Drain Current			50	A	
I_{SDM}^*	Source Drain Current (pulsed)			200	A	
V_{SD}	Forward On Voltage			2	V	$I_{SD} = 50\text{A}$, $V_{GS} = 0$
t_{rr}	Reverse Recovery Time			150	nS	$I_{SD} = 50\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$ $V_R = 30\text{V}$, $T_j = 150^\circ\text{C}$
Q_{rr}	Reverse Recovery Charge			0.2	μC	
I_{RRM}	Reverse Recovery Current			4	A	

*Pulsed: Pulse Duration 300 μs , Duty Cycle 1.5%.

Avalanche Characteristics		Min.	Typ.	Max.	Units	Test Conditions
I_{AR}	Avalanche Current			55	A	(repetitive or non-repetitive, $T_j = 25^\circ\text{C}$)
E_{AS}	Single Pulse Avalanche Energy			520	mJ	(starting $T_j = 25^\circ\text{C}$, $I_D = I_{AR}$, $V_{DD} = 25\text{V}$)
E_{AR}	Repetitive Avalanche Energy			130	mJ	(pulse width limited by $T_{j,max}$, $d < 1\%$)
I_{AR}	Avalanche Current			34	A	(repetitive or non-repetitive, $T_j = 100^\circ\text{C}$)
Electrical Characteristics - OFF						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	50			V	$I_D = 250\ \mu\text{A}$, $V_{GS} = 0$
I_{DSS}	Zero Gate Voltage Drain Current ($V_{GS} = 0$)			250 1000	μA	$V_{DS} = \text{Max. Rat.}$ $V_{DS} = \text{Max. Rat.} \times 0.8$, $T_C = 125^\circ\text{C}$
I_{GSS}	Gate-Body Leakage Current ($V_{DS} = 0$)			± 100	nA	$V_{GS} = \pm 20\text{V}$
Electrical Characteristics - ON*						
$V_{GS(th)}$	Gate Threshold Voltage	2		4	V	$V_{DS} = V_{GS}$, $I_D = 250\ \mu\text{A}$
$R_{DS(on)}$	Static Drain-Source On Resistance			.025 .050		$V_{GS} = 10\text{V}$, $I_D = 30\text{A}$ $T_C = 100^\circ\text{C}$
$I_{D(on)}$	On State Drain Current	55			A	$V_{DS} > I_{D(on)} \times R_{DS(on)max}$, $V_{GS} = 10\text{V}$
Electrical Characteristics - Dynamic						
g_{fs}	Forward Transconductance	16			S	$V_{DS} > I_{D(on)} \times R_{DS(on)max}$, $I_D = 30\text{A}$
C_{iss}	Input Capacitance		2500		pF	$V_{DS} = 25\text{V}$
C_{oss}	Output Capacitance		950		pF	$V_{GS} = 0$
C_{res}	Reverse Transfer Capacitance		250		pF	$f = 1\text{MHz}$
Electrical Characteristics - Switching On						
$T_{d(on)}$	Turn-On Time		110		nS	$V_{DD} = 25\text{V}$, $I_D = 55\text{A}$
t_r	Rise Time		300		nS	$R_G = 50$, $V_{GS} = 10\text{V}$
$(di/dt)_{on}$	Turn-On Current Slope		160		A/ μS	$V_{DD} = 40\text{V}$, $I_D = 55\text{A}$ $R_G = 50$, $V_{GS} = 10\text{V}$
Q_g	Total Gate Charge		65		nC	$V_{DD} = 25\text{V}$, $I_D = 30\text{A}$, $V_{GS} = 10\text{V}$
Electrical Characteristics - Switching Off						
$T_{r(voff)}$	Off Voltage Rise Time		160		nS	$V_{DD} = 40\text{V}$, $I_D = 55\text{A}$
t_f	Fall Time		160		nS	$R_G = 50$, $V_{GS} = 10\text{V}$
t_{cross}	Cross-Over Time		320		nS	
Electrical Characteristics - Source Drain Diode						
I_{SD}	Source Drain Current			55	A	
I_{SDM}^*	Source Drain Current (pulsed)			200	A	
V_{SD}	Forward On Voltage			1.6	V	$I_{SD} = 55\text{A}$, $V_{GS} = 0$
t_{rr}	Reverse Recovery Time			100	nS	$I_{SD} = 55\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$ $V_R = 25\text{V}$, $T_j = 150^\circ\text{C}$
Q_{rr}	Reverse Recovery Charge			.25	μC	
I_{RRM}	Reverse Recovery Current			5	A	

*Pulsed: Pulse Duration 300 μs , Duty Cycle 1.5%.

OM50N05SA (T_C = 25°C unless otherwise specified)

OM50N05ST (T_C = 25°C unless otherwise specified)

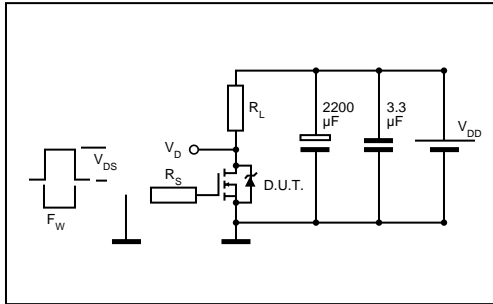
Avalanche Characteristics		Min.	Typ.	Max.	Units	Test Conditions
I _{AR}	Avalanche Current			50	A	(repetitive or non-repetitive, T _J = 25°C)
E _{AS}	Single Pulse Avalanche Energy			400	mJ	(starting T _J = 25°C, I ₀ = I _{AR} , V _{DD} = 25 V)
E _{AR}	Repetitive Avalanche Energy			100	mJ	(pulse width limited by T _{imax} , d < 1%)
I _{AR}	Avalanche Current			30	A	(repetitive or non-repetitive, T _J = 100°C)
Electrical Characteristics - OFF						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	50			V	I ₀ = 250 μA, V _{GS} = 0
I _{DSS}	Zero Gate Voltage Drain Current (V _{GS} = 0)			250 1000	μA μA	V _{DS} = Max. Rat. V _{DS} = Max. Rat. x 0.8, T _C = 125°C
I _{GSS}	Gate-Body Leakage Current (V _{DS} = 0)			±100	nA	V _{GS} = ±20 V
Electrical Characteristics - ON*						
V _{GS(th)}	Gate Threshold Voltage	2		4	V	V _{DS} = V _{GS} , I _D = 250 μA
R _{DS(on)}	Static Drain-Source On Resistance			.028 .056		V _{GS} = 10 V, I _D = 25 A T _C = 100°C
I _{D(on)}	On State Drain Current	50			A	V _{DS} > I _{D(on)} × R _{DS(on)max} , V _{GS} = 10 V
Electrical Characteristics - Dynamic						
g _{fs}	Forward Transconductance	17			S	V _{DS} > I _{D(on)} × R _{DS(on)max} , I _D = 25 A
C _{ies}	Input Capacitance		2000		pF	V _{DS} = 25 V
C _{oes}	Output Capacitance		1000		pF	V _{GS} = 0
C _{res}	Reverse Transfer Capacitance		300		pF	f = 1 MHz
Electrical Characteristics - Switching On						
T _{d(on)}	Turn-On Time		45		nS	V _{DD} = 25 V, I ₀ = 29 A
t _r	Rise Time		90		nS	R _G = 4.7 , V _{GS} = 10 V
(di/dt) _{on}	Turn-On Current Slope		200		A/μS	V _{DD} = 40 V, I ₀ = 50 A R _G = 50 , V _{GS} = 10 V
Q _g	Total Gate Charge		45		nC	V _{DD} = 40 V, I ₀ = 50 A, V _{GS} = 10 V
Electrical Characteristics - Switching Off						
T _{r(Voff)}	Off Voltage Rise Time		160		nS	V _{DD} = 40 V, I ₀ = 50 A
t _f	Fall Time		90		nS	R _G = 50 , V _{GS} = 10 V
t _{cross}	Cross-Over Time		250		nS	
Electrical Characteristics - Source Drain Diode						
I _{SD}	Source Drain Current			50	A	
I _{SDM} *	Source Drain Current (pulsed)			200	A	
V _{SD}	Forward On Voltage			2	V	I _{SD} = 50 A, V _{GS} = 0
t _{rr}	Reverse Recovery Time			150	nS	I _{SD} = 50 A, di/dt = 100 A/μs V _R = 30 V, T _J = 150°C
Q _{rr}	Reverse Recovery Charge			0.2	μC	
I _{RSM}	Reverse Recovery Current			4	A	

*Pulsed: Pulse Duration 300μS, Duty Cycle 1.5%.

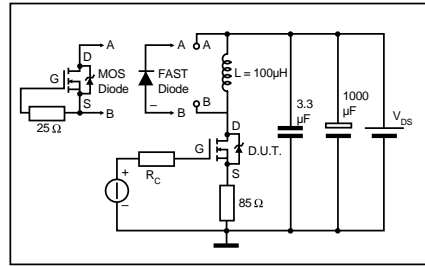
Avalanche Characteristics		Min.	Typ.	Max.	Units	Test Conditions
I _{AR}	Avalanche Current			50	A	(repetitive or non-repetitive, T _J = 25°C)
E _{AS}	Single Pulse Avalanche Energy			400	mJ	(starting T _J = 25°C, I ₀ = I _{AR} , V _{DD} = 25 V)
E _{AR}	Repetitive Avalanche Energy			100	mJ	(pulse width limited by T _{imax} , d < 1%)
I _{AR}	Avalanche Current			30	A	(repetitive or non-repetitive, T _J = 100°C)
Electrical Characteristics - OFF						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	50			V	I ₀ = 250 μA, V _{GS} = 0
I _{DSS}	Zero Gate Voltage Drain Current (V _{GS} = 0)			250 1000	μA μA	V _{DS} = Max. Rat. V _{DS} = Max. Rat. x 0.8, T _C = 125°C
I _{GSS}	Gate-Body Leakage Current (V _{DS} = 0)			±100	nA	V _{GS} = ±20 V
Electrical Characteristics - ON*						
V _{GS(th)}	Gate Threshold Voltage	2		4	V	V _{DS} = V _{GS} , I _D = 250 μA
R _{DS(on)}	Static Drain-Source On Resistance			.033 .066		V _{GS} = 10 V, I _D = 25 A T _C = 100°C
I _{D(on)}	On State Drain Current	50			A	V _{DS} > I _{D(on)} × R _{DS(on)max} , V _{GS} = 10 V
Electrical Characteristics - Dynamic						
g _{fs}	Forward Transconductance	17			S	V _{DS} > I _{D(on)} × R _{DS(on)max} , I _D = 25 A
C _{ies}	Input Capacitance		2000		pF	V _{DS} = 25 V
C _{oes}	Output Capacitance		1000		pF	V _{GS} = 0
C _{res}	Reverse Transfer Capacitance		300		pF	f = 1 MHz
Electrical Characteristics - Switching On						
T _{d(on)}	Turn-On Time		45		nS	V _{DD} = 25 V, I ₀ = 29 A
t _r	Rise Time		90		nS	R _G = 4.7 , V _{GS} = 10 V
(di/dt) _{on}	Turn-On Current Slope		200		A/μS	V _{DD} = 40 V, I ₀ = 50 A R _G = 50 , V _{GS} = 10 V
Q _g	Total Gate Charge		45		nC	V _{DD} = 40 V, I ₀ = 50 A, V _{GS} = 10 V
Electrical Characteristics - Switching Off						
T _{r(Voff)}	Off Voltage Rise Time		160		nS	V _{DD} = 40 V, I ₀ = 50 A
t _f	Fall Time		90		nS	R _G = 50 , V _{GS} = 10 V
t _{cross}	Cross-Over Time		250		nS	
Electrical Characteristics - Source Drain Diode						
I _{SD}	Source Drain Current			50	A	
I _{SDM} *	Source Drain Current (pulsed)			200	A	
V _{SD}	Forward On Voltage			2	V	I _{SD} = 50 A, V _{GS} = 0
t _{rr}	Reverse Recovery Time			150	nS	I _{SD} = 50 A, di/dt = 100 A/μs V _R = 30 V, T _J = 150°C
Q _{rr}	Reverse Recovery Charge			0.2	μC	
I _{RSM}	Reverse Recovery Current			4	A	

*Pulsed: Pulse Duration 300μS, Duty Cycle 1.5%.

Switching Times Test Circuits
For Resistive Load

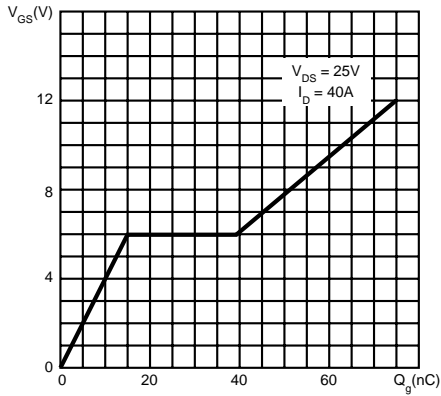


Test Circuit For Inductive Load Switching
And Diode Reverse Recovery Time

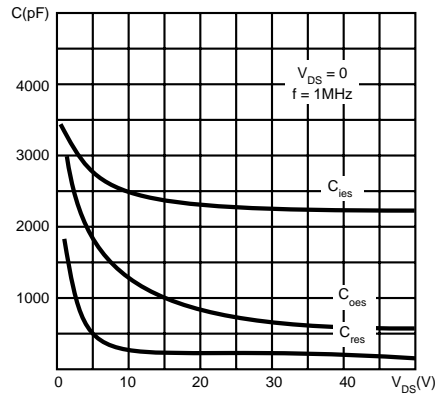


TYPICAL CHARACTERISTICS

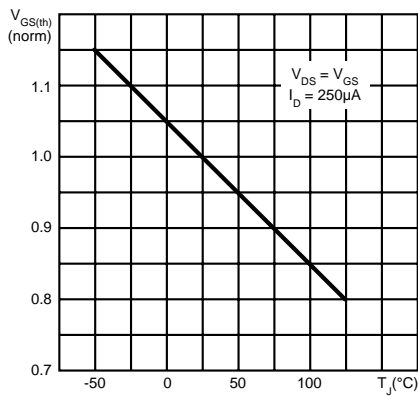
Gate Charge vs Gate-Source Voltage



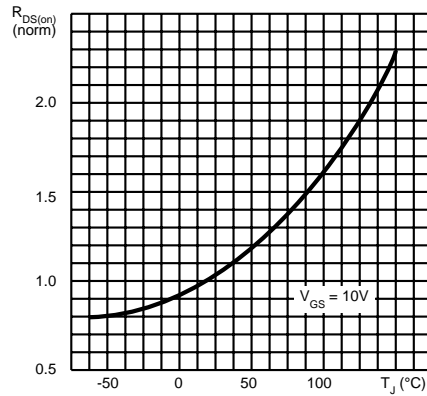
Capacitance Variations



Normalized Gate Threshold
Voltage vs Temperature



Normalized On Resistance
vs Temperature



3.1