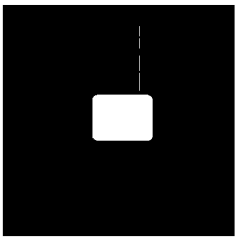
DUAL POWER MOSFETS IN HERMETIC ISOLATED DUAL IN-LINE PACKAGES



100V Thru 500V, Dual High Current, N-Channel MOSFETs

FEATURES

- Two Isolated MOSFETs In A Hermetic Metal Package, Size 3 And 4 Die
- Available In A Power DIP And Surface Mount Configuration
- Fast Switching, Low Drive Current
- Ease Of Paralleling For Added Power
- Low $R_{DS(on)}$
- Available Screened To MIL-S-19500, TX, TXV And S Level

DESCRIPTION

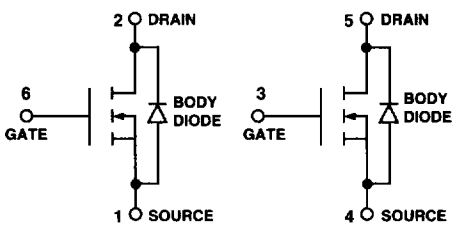
This series of hermetically packaged products feature the latest advanced MOSFET and packaging technology. They are ideally suited for Military requirements where small size, high performance and high reliability are required, and in applications such as switching power supplies, motor controls, inverters, choppers, audio amplifiers and high energy pulse circuits.

MAXIMUM RATINGS (Per Transistor) @ $T_C = 25°C$

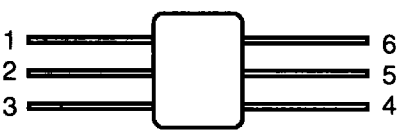
PART NUMBER	Die Size	V_{DS} (V)	$R_{DS(on)}$ (Ω)	$I_{D(MAX)}$ (A)
OM6234SD/SM	3	100	.18	14
OM6238SD/SM	4		.095	22
OM6235SD/SM	3	200	.40	9
OM6239SD/SM	4		.18	18
OM6236SD/SM	3	400	1.00	5.5
OM6240SD/SM	4		.55	10
OM6237SD/SM	3	500	1.50	4.5
OM6241SD/SM	4		.85	8

3.1

SCHEMATIC



PIN CONNECTION



ELECTRICAL CHARACTERISTICS: (T_C = 25°C unless otherwise noted)
STATIC P/N OM6234SD/SM (100V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	100			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$, I_D = 250 µA
I_{GSS}	Gate-Body Leakage			± 100	nA	V_{GS} = ± 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1	0.25	mA	V_{DS} = Max. Rat., V_{GS} = 0
			0.2	1.0	mA	V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	14			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		1.2	1.44	V	V_{GS} = 10 V, I_D = 8.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.15	0.18	Ω	V_{GS} = 10 V, I_D = 8.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]			0.31	Ω	V_{GS} = 10 V, I_D = 8.0 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	4.0			S (℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 8.0 A
C_{iss}	Input Capacitance		750		pF	V_{GS} = 0
C_{oss}	Output Capacitance		250		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		100		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		13		ns	V_{DD} = 30 V, I_D = 8.0 A, R_G = 7.5 Ω, V_{GS} = 10 V (see test circuit)
t_r	Rise Time		35		ns	
$t_{d(off)}$	Turn-Off Delay Time		38		ns	
t_f	Fall Time		23		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 14	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 56	A	
V_{SD}	Diode Forward Voltage[1]			- 2.5	V	T_C = 25°C, I_S = -14 A, V_{GS} = 0
						T_C = 25°C, I_S = -12 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		100		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

ELECTRICAL CHARACTERISTICS: (T_C = 25°C unless otherwise noted)
STATIC P/N OM6235SD/SM (200V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	200			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$, I_D = 250 µA
I_{GSS}	Gate-Body Leakage			± 100	nA	V_{GS} = ± 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1	0.25	mA	V_{DS} = Max. Rat., V_{GS} = 0
			0.2	1.0	mA	V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	9.0			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		1.25	2.0	V	V_{GS} = 10 V, I_D = 5.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.25	0.4	Ω	V_{GS} = 10 V, I_D = 5.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.54	0.76	Ω	V_{GS} = 10 V, I_D = 5.0 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	3.0	5.8		S (℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 5.0 A
C_{iss}	Input Capacitance		780		pF	V_{GS} = 0
C_{oss}	Output Capacitance		150		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		55		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		9		ns	V_{DD} = 75 V, I_D = 5.0 A, R_G = 7.5 Ω, V_{GS} = 10 V (see test circuit)
t_r	Rise Time		18		ns	
$t_{d(off)}$	Turn-Off Delay Time		45		ns	
t_f	Fall Time		27		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 9	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 36	A	
V_{SD}	Diode Forward Voltage[1]			- 2	V	T_C = 25°C, I_S = -9.0 A, V_{GS} = 0
						T_C = 25°C, I_S = -8.0 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		250		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

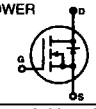
ELECTRICAL CHARACTERISTICS: (T_C = 25°C unless otherwise noted)
STATIC P/N OM6236SD/SM (400V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	400			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	V_{DS} = V_{GS}, I_D = 250 µA
I_{GSS}	Gate-Body Leakage			± 100	nA	V_{GS} = ± 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1	0.25	mA	V_{DS} = Max. Rat., V_{GS} = 0
			0.2	1.0	mA	V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	5.5			A	V_{DS} ≥ 2 $V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		2.4	3.0	V	V_{GS} = 10 V, I_D = 3.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.8	1.0	Ω	V_{GS} = 10 V, I_D = 3.0 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		1.6	2.0	Ω	V_{GS} = 10 V, I_D = 3.0 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	3.0	3.6		S (℧)	V_{DS} ≥ 2 $V_{DS(on)}$, I_D = 3.0 A
C_{iss}	Input Capacitance		700		pF	V_{GS} = 0
C_{oss}	Output Capacitance		70		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		20		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		18		ns	V_{DD} = 175 V, I_D = 3.0 A, R_G = 10 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		20		ns	
$t_{d(off)}$	Turn-Off Delay Time		40		ns	
t_f	Fall Time		25		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 5.5	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier. 
I_{SM}	Source Current[1] (Body Diode)			- 22	A	
V_{SD}	Diode Forward Voltage[1]			- 1.6	V	T_C = 25°C, I_S = -5.5 A, V_{GS} = 0
						T_C = 25°C, I_S = -4.5 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		470		ns	T_J = 150°C, I_F = I_S, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

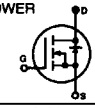
ELECTRICAL CHARACTERISTICS: (T_C = 25°C unless otherwise noted)
STATIC P/N OM6237SD/SM (500V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	500			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	V_{DS} = V_{GS}, I_D = 250 µA
I_{GSS}	Gate-Body Leakage			± 100	nA	V_{GS} = ± 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1	0.25	mA	V_{DS} = Max. Rat., V_{GS} = 0
			0.2	1.0	mA	V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	4.5			A	V_{DS} ≥ 2 $V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		3.25	3.75	V	V_{GS} = 10 V, I_D = 2.5 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		1.3	1.5	Ω	V_{GS} = 10 V, I_D = 2.5 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		2.9	3.3	Ω	V_{GS} = 10 V, I_D = 2.5 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	2.5	2.8		S(℧)	V_{DS} ≥ 2 $V_{DS(on)}$, I_D = 2.5 A
C_{iss}	Input Capacitance		700		pF	V_{GS} = 0
C_{oss}	Output Capacitance		90		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		30		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		18		ns	V_{DD} = 225 V, I_D = 2.5 A, R_G = 7.5 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		20		ns	
$t_{d(off)}$	Turn-Off Delay Time		42		ns	
t_f	Fall Time		25		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 4.5	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier. 
I_{SM}	Source Current[1] (Body Diode)			- 18	A	
V_{SD}	Diode Forward Voltage[1]			- 1.4	V	T_C = 25°C, I_S = -4.5 A, V_{GS} = 0
						T_C = 25°C, I_S = -4 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		430		ns	T_J = 150°C, I_F = I_S, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

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ELECTRICAL CHARACTERISTICS: T_C = 25° unless otherwise noted
STATIC P/N OM6238SD/SM (100V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	100			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$, I_D = 250 µA
I_{GSSF}	Gate-Body Leakage Forward			100	nA	V_{GS} = 20 V
I_{GSSR}	Gate-Body Leakage Reverse			-100	nA	V_{GS} = - 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1 0.2	0.25 1.0	mA mA	V_{DS} = Max. Rat., V_{GS} = 0 V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	14			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		1.275	1.425	V	V_{GS} = 10 V, I_D = 15 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		.085	.095	Ω	V_{GS} = 10 V, I_D = 15 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		.130	.155	Ω	V_{GS} = 10 V, I_D = 15 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	10			S(℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 15 A
C_{iss}	Input Capacitance		1275		pF	V_{GS} = 0
C_{oss}	Output Capacitance		550		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		160		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		16		ns	V_{DD} = 30 V, I_D = 5 A, R_G = 5 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		19		ns	
$t_{d(off)}$	Turn-Off Delay Time		42		ns	
t_f	Fall Time		24		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 27	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 108	A	
V_{SD}	Diode Forward Voltage[1]			- 2.0	V	T_C = 25°C, I_S = -24 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		200		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

ELECTRICAL CHARACTERISTICS: T_C = 25° unless otherwise noted
STATIC P/N OM6239SD/SM (200V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	200			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$ I_D = 250 µA
I_{GSSF}	Gate-Body Leakage Forward			100	nA	V_{GS} = 20 V
I_{GSSR}	Gate-Body Leakage Reverse			- 100	nA	V_{GS} = - 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1 0.2	0.25 1.0	mA mA	V_{DS} = Max. Rat., V_{GS} = 0 V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	14			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		1.4	1.8	V	V_{GS} = 10 V, I_D = 10 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.14	0.18	Ω	V_{GS} = 10 V, I_D = 10 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.28	0.36	Ω	V_{GS} = 10 V, I_D = 10 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	6.0	9.0		S(℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 10 A
C_{iss}	Input Capacitance		1000		pF	V_{GS} = 0
C_{oss}	Output Capacitance		250		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		100		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		17		ns	V_{DD} = 75 V, I_D = 18 A, R_G = 5 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		52		ns	
$t_{d(off)}$	Turn-Off Delay Time		36		ns	
t_f	Fall Time		30		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 18	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 72	A	
V_{SD}	Diode Forward Voltage[1]			- 1.5	V	T_C = 25°C, I_S = -18 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		350		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

ELECTRICAL CHARACTERISTICS: T_C = 25° unless otherwise noted
STATIC P/N OM6240SD/SM (400V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	400			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$, I_D = 250 µA
I_{GSSF}	Gate-Body Leakage Forward			100	nA	V_{GS} = 20 V
I_{GSSR}	Gate-Body Leakage Reverse			-100	nA	V_{GS} = - 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1 0.2	0.25 1.0	mA mA	V_{DS} = Max. Rat., V_{GS} = 0 V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	10			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		2.35	2.75	V	V_{GS} = 10 V, I_D = 5 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.47	0.55	Ω	V_{GS} = 10 V, I_D = 5 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.93	1.10	Ω	V_{GS} = 10 V, I_D = 5 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	4.0	4.4		S(℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 5 A
C_{iss}	Input Capacitance		1150		pF	V_{GS} = 0
C_{oss}	Output Capacitance		165		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		70		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		17		ns	V_{DD} = 175 V, I_D = 5 A, R_G = 5 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		12		ns	
$t_{d(off)}$	Turn-Off Delay Time		45		ns	
t_f	Fall Time		30		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 10	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 40	A	
V_{SD}	Diode Forward Voltage[1]			- 2	V	T_C = 25°C, I_S = -10 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		530		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

ELECTRICAL CHARACTERISTICS: T_C = 25° unless otherwise noted
STATIC P/N OM6241SD/SM (500V)

Parameter		Min.	Typ.	Max.	Units	Test Conditions
BV_{DSS}	Drain-Source Breakdown Voltage	500			V	V_{GS} = 0, I_D = 250 µA
$V_{GS(th)}$	Gate-Threshold Voltage	2.0		4.0	V	$V_{DS} = V_{GS}$, I_D = 250 µA
I_{GSSF}	Gate-Body Leakage Forward			100	nA	V_{GS} = 20 V
I_{GSSR}	Gate-Body Leakage Reverse			- 100	nA	V_{GS} = - 20 V
I_{DSS}	Zero Gate Voltage Drain Current		0.1 0.2	0.25 1.0	mA mA	V_{DS} = Max. Rat., V_{GS} = 0 V_{DS} = 0.8 Max. Rat., V_{GS} = 0, T_C = 125° C
$I_{D(on)}$	On-State Drain Current[1]	4.5			A	$V_{DS} \geq 2\ V_{DS(on)}$, V_{GS} = 10 V
$V_{DS(on)}$	Static Drain-Source On-State Voltage[1]		3.2	3.4	V	V_{GS} = 10 V, I_D = 4 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		0.8	0.85	Ω	V_{GS} = 10 V, I_D = 4 A
$R_{DS(on)}$	Static Drain-Source On-State Resistance[1]		1.50	1.65	Ω	V_{GS} = 10 V, I_D = 4 A, T_C = 125°C

DYNAMIC

g_{fs}	Forward Transductance[1]	4.0	4.8		S(℧)	$V_{DS} \geq 2\ V_{DS(on)}$, I_D = 4 A
C_{iss}	Input Capacitance		1225		pF	V_{GS} = 0
C_{oss}	Output Capacitance		200		pF	V_{DS} = 25 V
C_{rss}	Reverse Transfer Capacitance		85		pF	f = 1 MHz
$t_{d(on)}$	Turn-On Delay Time		17		ns	V_{DD} = 200 V, I_D = 4 A, R_G = 5 Ω, R_{GS} = 10V (See test circuit)
t_r	Rise Time		5		ns	
$t_{d(off)}$	Turn-Off Delay Time		42		ns	
t_f	Fall Time		14		ns	

BODY-DRAIN DIODE RATINGS AND CHARACTERISTICS

I_S	Continuous Source Current (Body Diode)			- 8	A	Modified MOSPOWER symbol showing the integral P-N Junction rectifier.
I_{SM}	Source Current[1] (Body Diode)			- 32	A	
V_{SD}	Diode Forward Voltage[1]			- 2	V	T_C = 25°C, I_S = -18 A, V_{GS} = 0
t_{rr}	Reverse Recovery Time		700		ns	T_J = 150°C, $I_F = I_S$, dI_F/ds = 100 A/µs

1 Pulse Test: Pulse Width ≤ 300µsec, Duty Cycle ≤ 2%.

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ABSOLUTE MAXIMUM RATINGS Per Transistor - Size 3 (T_C = 25°C unless otherwise noted)

	Parameter	OM6234	OM6235	OM6236	OM6237	Units
V_{DS}	Drain-Source Voltage	100	200	400	500	V
V_{DGR}	Drain-Gate Voltage (R_{GS} = 1 MΩ)	100	200	400	500	V
I_D @ T_C = 25°C	Continuous Drain Current	±14	±9	±5.5	±4.5	A
I_D @ T_C = 100°C	Continuous Drain Current	±9	±6	±3.5	±3	A
I_{DM}	Pulsed Drain Current[1]	56	±36	±22	±18	A
V_{GS}	Gate-Source Voltage	?	?	?	?	V
P_D @ T_C = 25°C	Maximum Power Dissipation	50	50	50	50	W
P_D @ T_C = 100°C	Maximum Power Dissipation	25	25	25	25	W
Junction To Case	Linear Derating Factor	0.43	0.43	0.43	0.43	W/°C
Junction To Ambient	Linear Derating Factor	.015	.015	.015	.015	W/°C
T_J	Operating and					
T_{stg}	Storage Temperature Range	-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Lead Temperature	(1/16" from case for 10 secs.)	300	300	300	300	°C

1 **Pulse Test:** Pulse width ≤ 300 µsec. Duty Cycle ≤ 2%.

THERMAL RESISTANCE Per Transistor (Typical) at (T_A = 25°C)

R_{thJC}	Junction-to-Case	2.3	°C/W	
R_{thJA}	Junction-to-Ambient	40	°C/W	Free Air Operation

ABSOLUTE MAXIMUM RATINGS Per Transistor - Size 4 (T_C = 25°C unless otherwise noted)

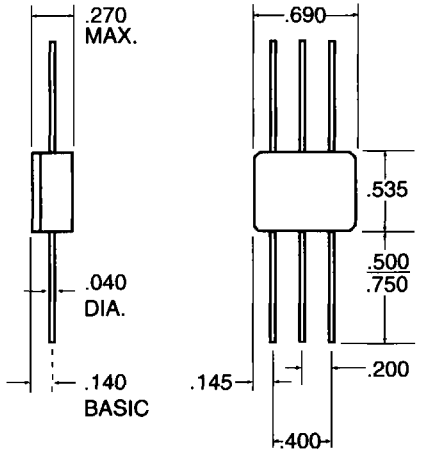
	Parameter	OM6238	OM6239	OM6240	OM6241	Units
V_{DS}	Drain-Source Voltage	100	200	400	500	V
V_{DGR}	Drain-Gate Voltage (R_{GS} = 1 MΩ)	100	200	400	500	V
I_D @ T_C = 25°C	Continuous Drain Current	±14	±14	±10	±8	A
I_D @ T_C = 100°C	Continuous Drain Current	±14	±11	±6	±5	A
I_{DM}	Pulsed Drain Current[1]	±56	±56	±40	±32	A
V_{GS}	Gate-Source Voltage	±20	±20	±20	±20	V
P_D @ T_C = 25°C	Maximum Power Dissipation	125	125	125	125	W
P_D @ T_C = 100°C	Maximum Power Dissipation	50	50	50	50	W
Junction To Case	Linear Derating Factor - Typical	1.0	1.0	1.0	1.0	W/°C
Junction To Ambient	Linear Derating Factor	.020	.020	.020	.020	W/°C
T_J	Operating and					
T_{stg}	Storage Temperature Range	-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Lead Temperature	(1/16" from case for 10 secs.)	300	300	300	300	°C

1 **Pulse Test:** Pulse width ≤ 300 µsec. Duty Cycle ≤ 2%.

THERMAL RESISTANCE Per Transistor (Typical) at (T_A = 25°C)

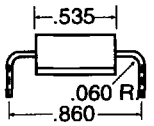
R_{thJC}	Junction-to-Case	1.00	°C/W	
R_{thJA}	Junction-to-Ambient	40	°C/W	Free Air Operation

MECHANICAL OUTLINE

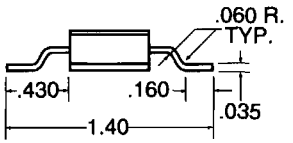


STANDARD LEAD FORMS

Power DIP



Surface Mount



ORDERING INFORMATION

Example:

OM6234	SD	M
Basic Part Number	Case Style	Screening Level

Basic Part No.	Case Style	Screening
OM6234 Through OM6241	SD - Dual In-Line SM - Surface Mount	M - 883 (See Section 4.2)