The GreenMOS® high voltage MOSFET utilizes charge balance technology to achieve outstanding low on-resistance and lower gate charge. It is engineered to minimize conduction loss, provide superior switching performance and robust avalanche capability.

The GreenMOS® Generic series is optimized for extreme switching performance to minimize switching loss. It is tailored for high power density applications to meet the highest efficiency standards.

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Parameter	Value	Unit
$V_{DS,\ min}$ @ $T_{j(max)}$	650	V
$I_{D,\ pulse}$	69	A
$R_{DS(ON)\ ,\ max}$ @ V_{GS}=10V	150	m
Q_g	23	nC

Product Name **Package**

Absolute Maximum Ratings at T_j=25 unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	600	V
Gate-source voltage	V_{GS}	±30	V
Continuous drain current[1], T_C=25 °C	I_D	23	A
Continuous drain current[1], T_C=100 °C		14.5	
Pulsed drain current[2], T_C=25 °C	$I_{D, pulse}$	69	A
Continuous diode forward current[1], T_C=25 °C	I_S	23	A
Diode pulsed current[2], T_C=25 °C	$I_{S, pulse}$	69	A
Power dissipation[3], T_C=25 °C	P_D	151	W
Single pulsed avalanche energy[5]	E_{AS}	600	mJ
MOSFET dv/dt ruggedness, V_{DS}	dv/dt	50	V/ns
Reverse diode dv/dt, V_{DS} SD D	dv/dt	15	V/ns
Operation and storage temperature	T_{stg}, T_j	-55 to 150	°C

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal resistance, junction-case	R	0.82	°C/W
Thermal resistance, junction-ambient[4]	R	62	°C/W

Electrical Characteristics at T_j=25 unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Drain-source breakdown voltage	BV_{DSS}	600			V	V_{GS}=0 V, I_D=250 uA
		650				V_{GS}=0 V, I_D=250 uA, T_j=150 °C
Gate threshold voltage						

Dynamic Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	C_{iss}		1356		pF	V_{GS}=0 V, V_{DS}=50 V, Hz
Output capacitance	C_{oss}		155		pF	
Reverse transfer capacitance	C_{rss}		2		pF	
Turn-on delay time	$t_{d(on)}$		38.2		ns	V_{GS}=10 V, V_{DS}=400 V, R_G=25 I_D=10 A
Rise time	t_r		25.2		ns	
Turn-off delay time	$t_{d(off)}$		79.2		ns	
Fall time	t_f		31.5		ns	

Electrical Characteristics Diagrams

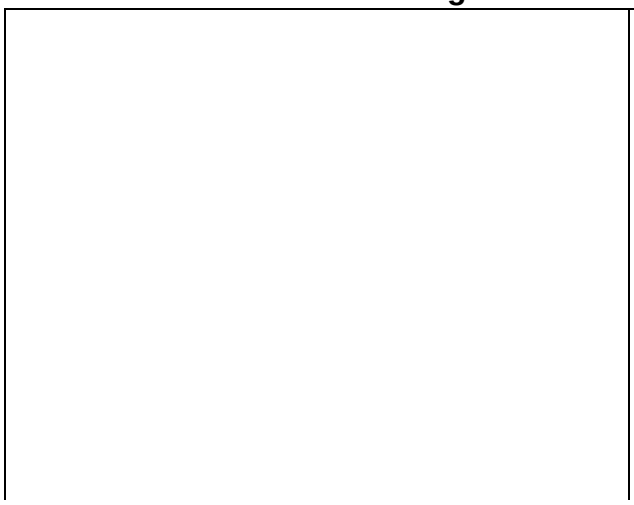


Figure 1. Typ. output characteristics

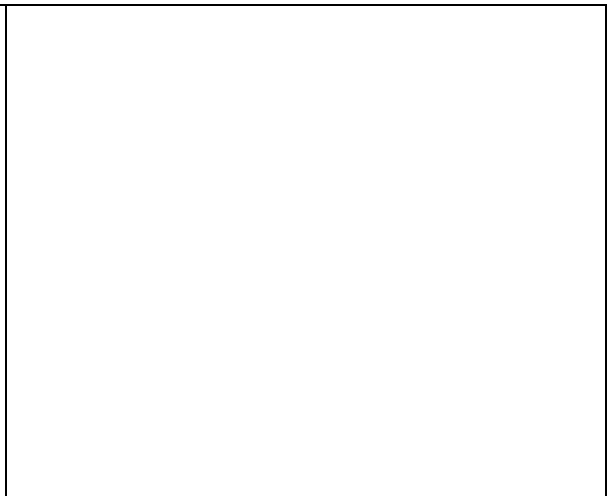
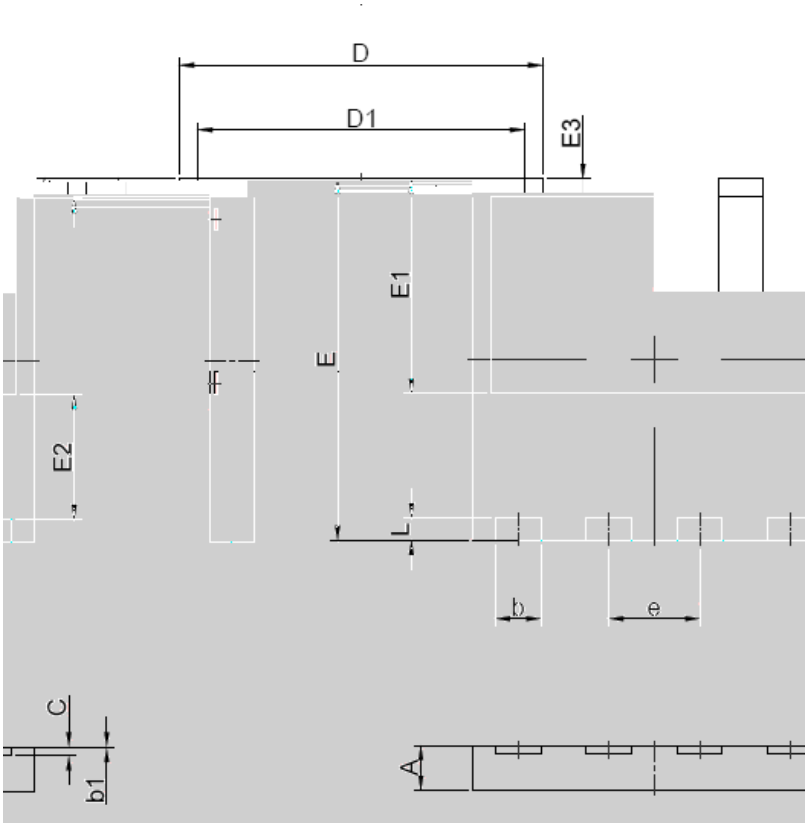


Figure 2. Typ. transfer characteristics

Figure 7. Forward characteristic of body diode	**Figure 8. Drain-source on-state resistance**

Package Information



Symbol	mm		
	Min	Nom	Max
A	0.90	1.00	1.10
b	0.90	1.00	1.10
b1	0.00	0.02	0.05
C	0.2 REF		
D	7.90	8.00	8.10
D1	7.10	7.20	7.30
E	7.90	8.00	8.10
E1	4.65	4.75	4.85
E2	2.65	2.75	2.85
E3	0.3	0.4	0.5
e	2.0 BSC		
L	0.4	0.5	0.6

Version 1: PDFN8*8-L package outline dimension

Ordering Information

Package Type	Units/ Reel	Reels/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
PDFN8*8-L	2500	1	2500	10	25000

Product Information

Product	Package	Pb Free	RoHS	Halogen Free
OSG60R150JF	PDFN8*8	yes	yes	yes

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