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.

GreenMOS®

RoHS

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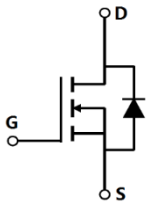
Parameter	Value	Unit
$V_{DS,\ min}$ @ $T_{j(max)}$	700	V
$I_{D,\ pulse}$	240	A
$R_{DS(ON)\ ,\ max}$ @ V_{GS}=10V	37	
Q_g	173	nC

Product Name	Package	Marking
OSG65R035HF	TO247	OSG65R035H



Absolute Maximum Ratings at T_j=25 unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	650	V
Gate-source voltage	V_{GS}	±30	V
Continuous drain current[1], T_C=25 °C	I_D	80	A
Continuous drain current[1], T_C=100 °C		50	
Pulsed drain current[2], T_C=25 °C	$I_{D, pulse}$	240	A
Continuous diode forward current[1], T_C=25 °C	I_S	80	A
Diode pulsed current[2], T_C=25 °C	$I_{S, pulse}$	240	A
Power dissipation[3] , T_C=25 °C	P_D	S,	

Dynamic Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	C_{iss}		7816		pF	V_{GS}=0 V, V_{DS}=50 V, kHz
Output capacitance	C_{oss}		537		pF	
Reverse transfer capacitance	C_{rss}		7.7		pF	
Turn-on delay time	$t_{d(on)}$		48.1		ns	V_{GS}=10 V, V_{DS}=400 V, R_G I_D=40 A
Rise time	t_r		88.6		ns	
Turn-off delay time	$t_{d(off)}$		124.6		ns	
Fall time	t_f		9.8		ns	

Gate Charge Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Total gate charge	Q_g		173		nC	V_{GS}=10 V, V_{DS}=400 V, I_D=40 A
Gate-source charge	Q_{gs}		32.5		nC	
Gate-drain charge	Q_{gd}		70.7		nC	
Gate plateau voltage	$V_{plateau}$		5.8		V	

Body Diode Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Diode forward voltage	V_{SD}			1.3	V	I_S=80 A, V_{GS}=0 V
Reverse recovery time	t_{rr}		435.2		ns	I_S=30 A,
Reverse recovery charge	Q_{rr}		9.0		C	
Peak reverse recovery current	I_{rrm}					

Electrical Characteristics Diagrams

Figure 1. Typ. output characteristics	**Figure 2. Typ. transfer characteristics**
Figure 3. Typ. capacitances	**Figure 4. Typ. gate charge**
Figure 5. Drain-source breakdown voltage	**Figure 6. Drain-source on-state resistance**

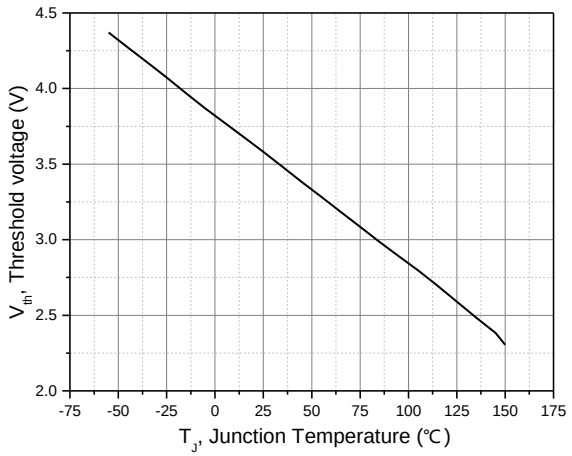


Figure 7. Threshold voltage

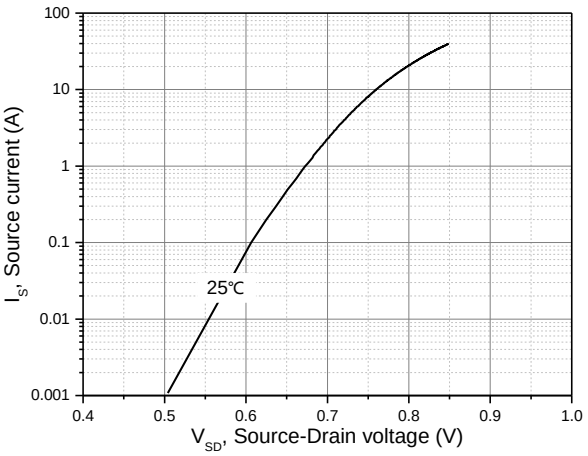


Figure 8. Forward characteristic of body diode

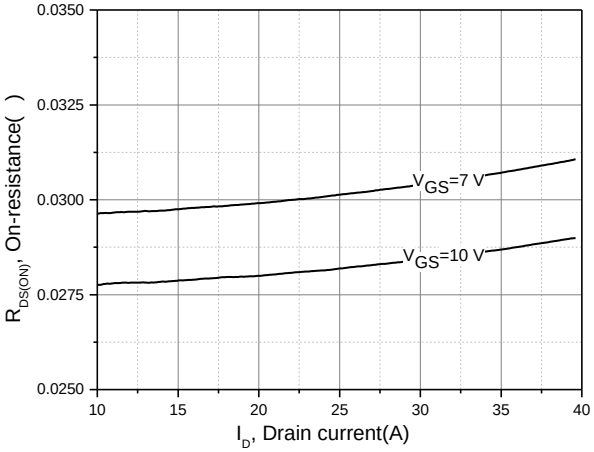


Figure 9. Drain-source on-state resistance

Figure 10. Drain current

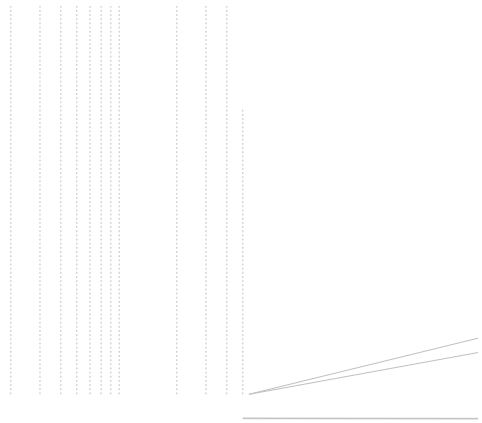


Figure 11. Safe operation area T_C=25

Test circuits and waveforms

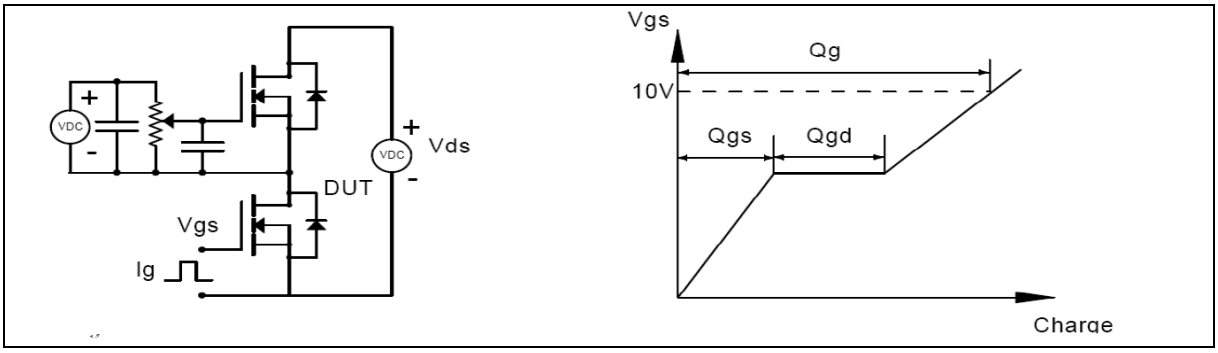


Figure 1. Gate charge test circuit & waveform

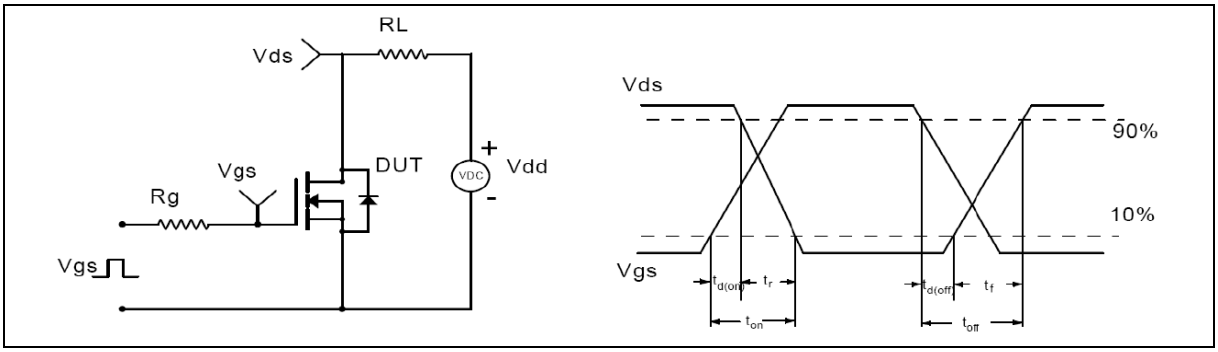


Figure 2. Switching time test circuit & waveforms

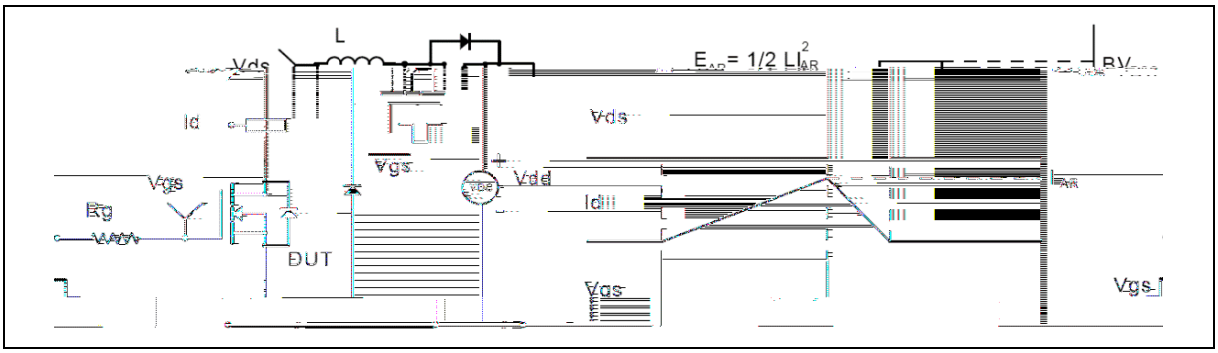


Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms

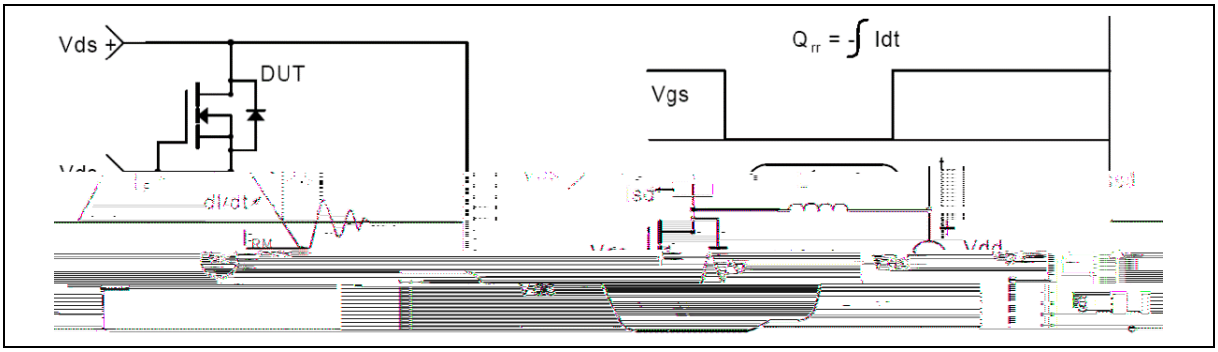


Figure 4. Diode reverse recovery test circuit & waveforms

Package Information

Symbol	mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.21	2.41	2.59
A2	1.85	2.00	2.15
b	1.11		

Ordering Information

Package Type	Units/ Tube	Tubes/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
TO247-C	30	11	330	6	1980

Product Information

Product	Package	Pb Free	RoHS	Halogen Free
OSG65R035HF	TO247	yes	yes	yes