

The GreenMOS<sup>®</sup> 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<sup>®</sup> 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.

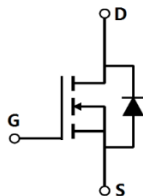
GreenMOS<sup>®</sup>



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Parameter	Value	Unit
$V_{DS, min} @ T_{j(max)}$	750	V
$I_{D, pulse}$	21	A
$R_{DS(ON), max} @ V_{GS}=10V$	750	m
$Q_g$	9.2	nC

Product Name	Package	Marking
OSG70R750FF	TO220F	OSG70R750F



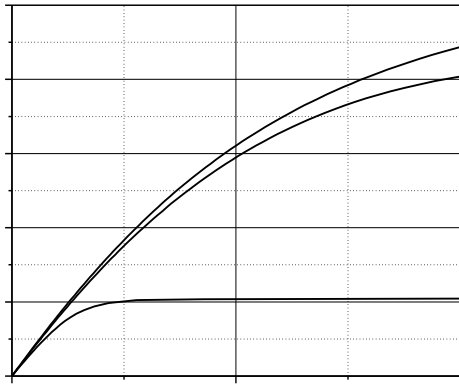
**Absolute Maximum Ratings** at  $T_j=25$  unless otherwise noted

Parameter	Symbol	Value	Unit
Drain-source voltage	$V_{DS}$	700	V
Gate-source voltage	$V_{GS}$	$\pm 30$	V
Continuous drain current <sup>1)</sup> , $T_C=25$ °C	$I_D$	7	A
Continuous drain current <sup>1)</sup> , $T_C=100$ °C		4.4	
Pulsed drain current <sup>2)</sup> , $T_C=25$ °C	$I_{D, pulse}$	21	A
Continuous diode forward current <sup>1)</sup> , $T_C=25$ °C	$I_S$	7	A
Diode pulsed current <sup>2)</sup> , $T_C=25$ °C	$I_{S, pulse}$	21	

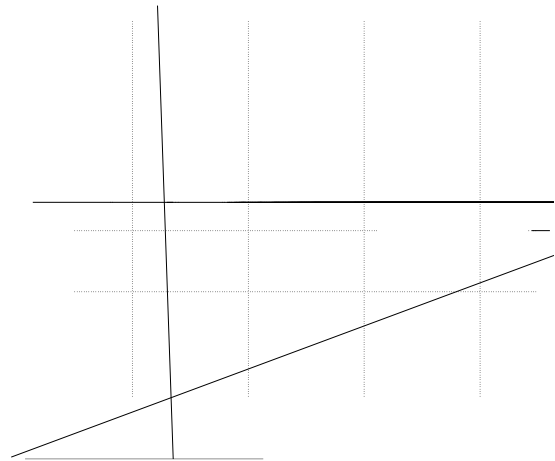
**Dynamic Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	$C_{iss}$		459		$\mu\text{F}$	$V_{GS}$

**Electrical Characteristics Diagrams**



**Figure 1. Typ. output characteristics**



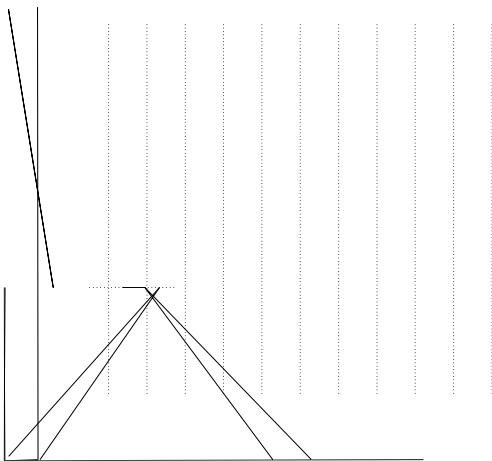
**Figure 2. Typ. transfer characteristics**



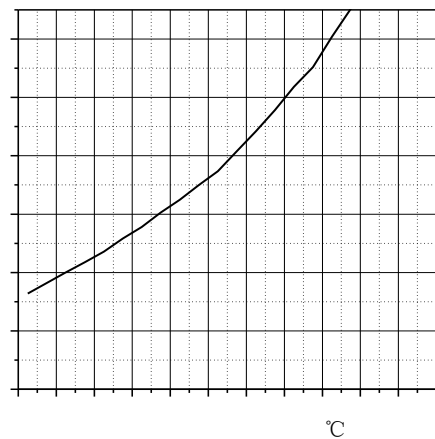
**Figure 3. Typ. capacitances**



**Figure 4. Typ. gate charge**



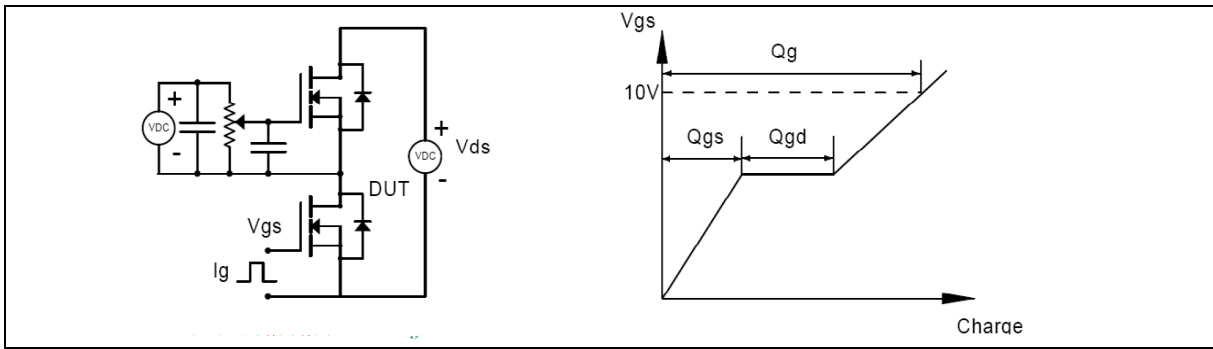
**Figure 5. Drain-source breakdown voltage**



**Figure 6. Drain-source on-state resistance**



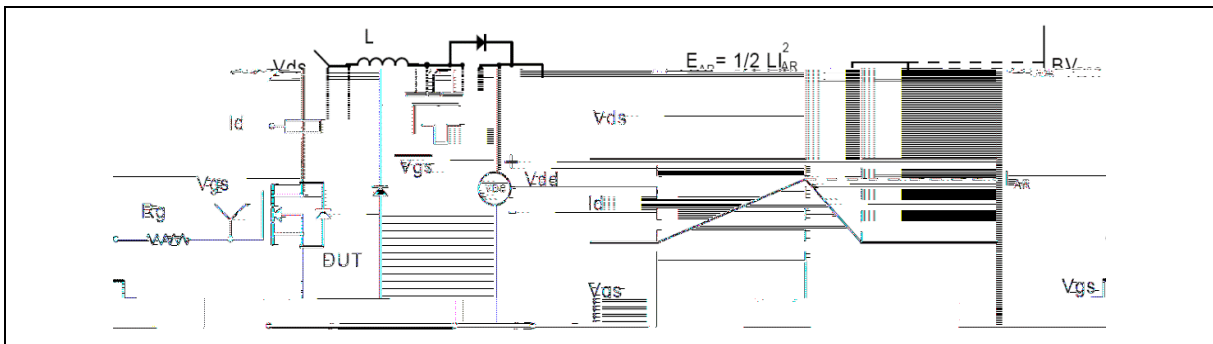
**Test circuits and waveforms**



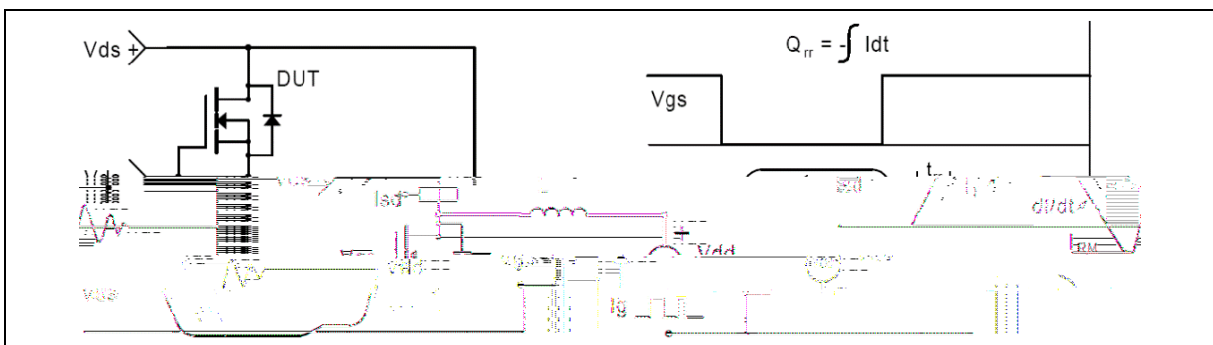
**Figure 1. Gate charge test circuit & waveform**



**Figure 2. Switching time test circuit & waveforms**

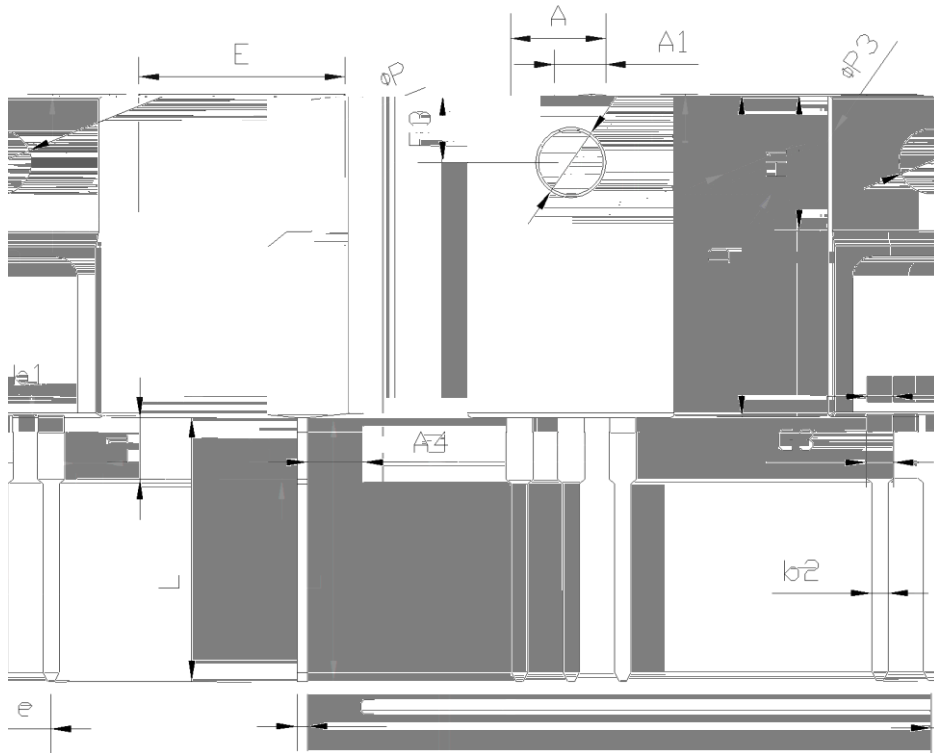


**Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms**



**Figure 4. Diode reverse recovery test circuit & waveforms**

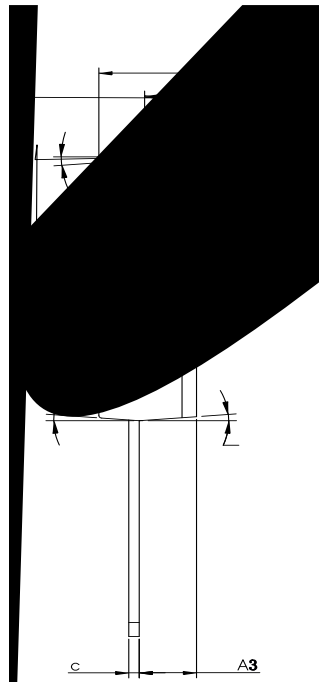
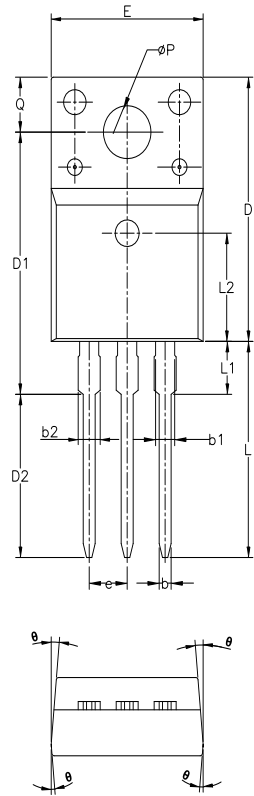
**Package Information**



Symbol	mm		
	Min	Nom	Max
E	9.96	10.16	10.36
A	4.50	4.70	4.90
A1	2.34	2.54	2.74
A4	2.56	2.76	2.96
c	0.40	0.50	0.65
D	15.57	15.87	16.17
H1	6.70REF		
e	2.54BSC		
L	12.68	12.98	13.28
L1	2.88	3.03	3.18
	3.03	3.18	3.38
	3.15	3.45	3.65
F3	3.15	3.30	3.45
G3	1.25	1.35	1.55
b1	1.18	1.28	1.43
b2	0.70	0.80	0.95

Version 1: TO220F-C package outline dimension

**Package Information**



Symbol	mm		
	Min	Nom	Max
A	4.40	4.50	4.60
A1	1.27	1.30	1.33
A2	2.30	2.40	2.50
b	0.70	-	0.90
b1	1.27	-	1.40
c	0.45	0.50	0.60
D	15.30	15.70	16.10
D1	9.10	9.20	9.30
D2	13.10	-	13.70
E	9.70	9.90	10.20
E1	7.80	8.00	8.20
e	2.54BSC		
e1	5.08BSC		
H1	6.30	6.50	6.70
L	12.78	13.08	13.38
L1	-	-	3.50
L2	4.60REF		
	3.55	3.60	3.65
Q	2.73	-	2.87
1	1		

Version 2: TO220F-J package outline dimension



