

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.

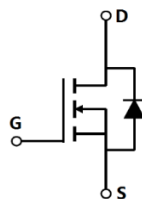
The GreenMOS<sup>®</sup> Generic series is optimized for extreme switching performance to minimize switching loss. It is tailored for high power density applications to meet the highest efficiency standards.




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Parameter	Value	Unit
$V_{DS, min} @ T_{j(max)}$	650	V
$I_{D, pulse}$	60	A
$R_{DS(ON), max} @ V_{GS}=10V$	180	m
$Q_g$	23.3	nC

Product Name	Package	Marking
OSG60R180PF	TO220	OSG60R180P

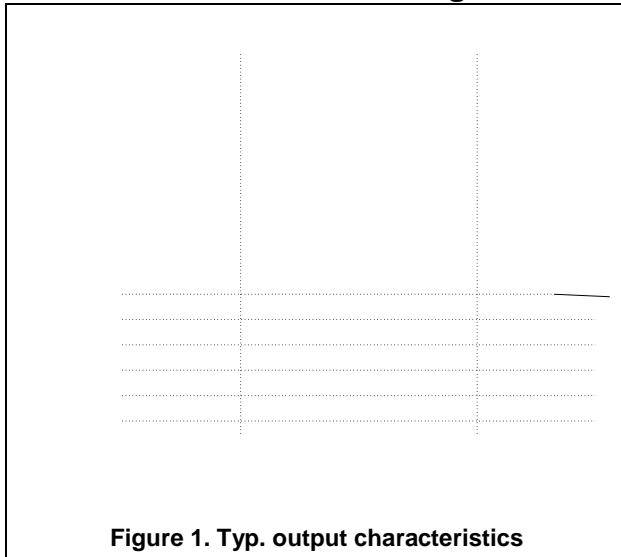




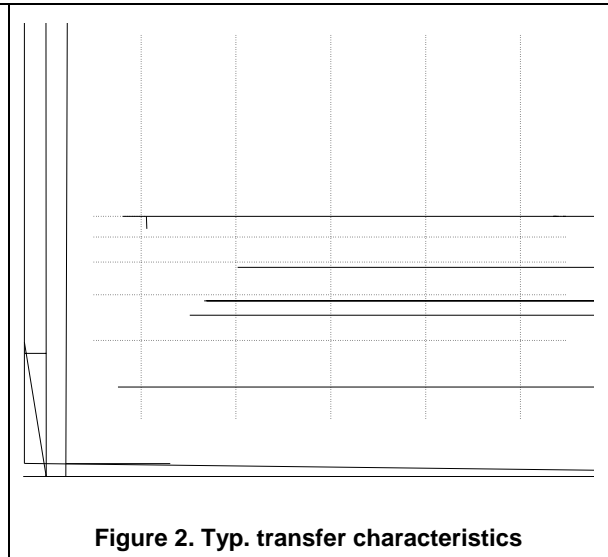
**Dynamic Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	$C_{iss}$		1440		pF	$V_{GS}=0\text{ V}$ , $V_{DS}=50\text{ V}$ , Hz
Output capacitance	$C_{oss}$		105		pF	
Reverse transfer capacitance	$C_{rss}$		3.94		pF	
Turn-on delay time	$t_{d(on)}$	1	38			

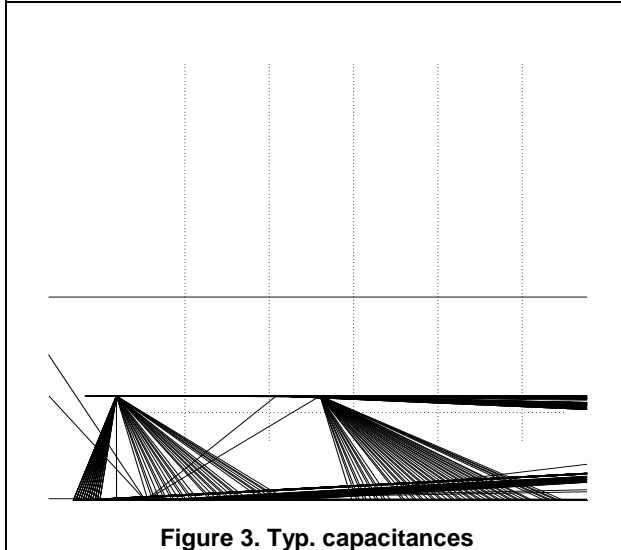
**Electrical Characteristics Diagrams**



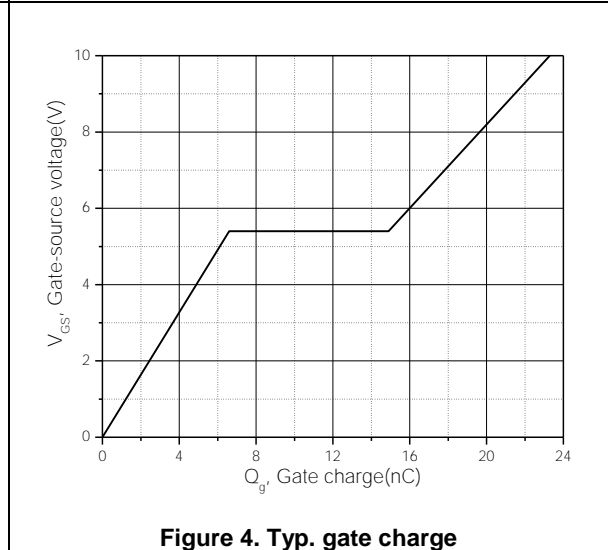
**Figure 1. Typ. output characteristics**



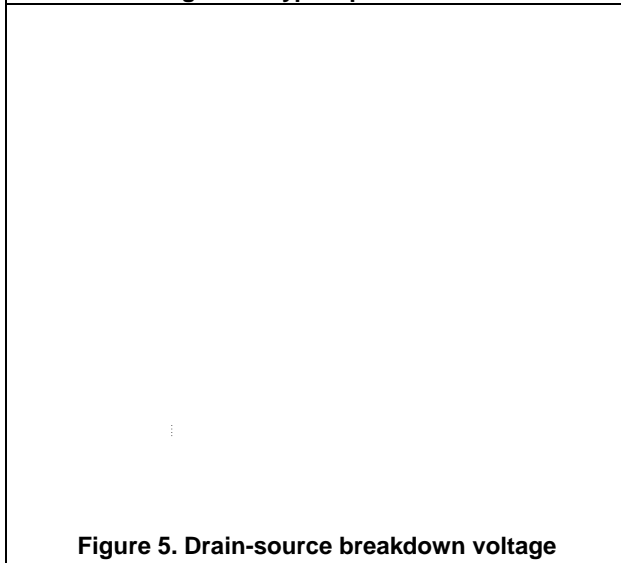
**Figure 2. Typ. transfer characteristics**



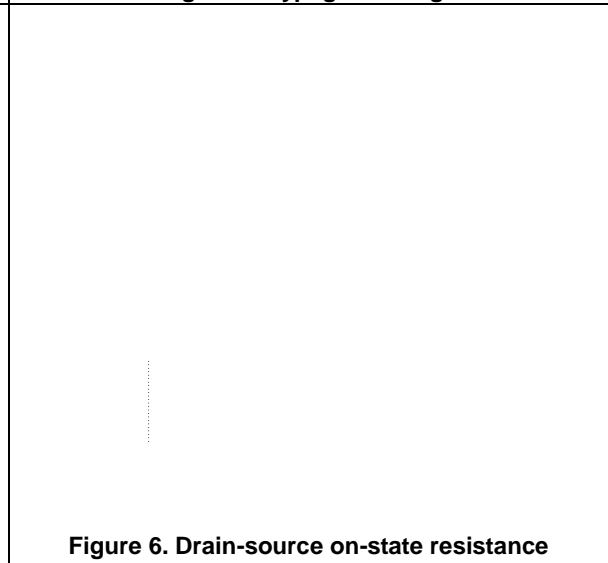
**Figure 3. Typ. capacitances**



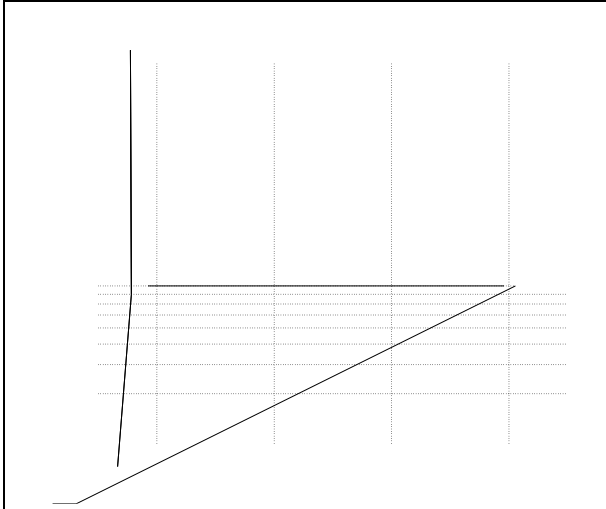
**Figure 4. Typ. gate charge**



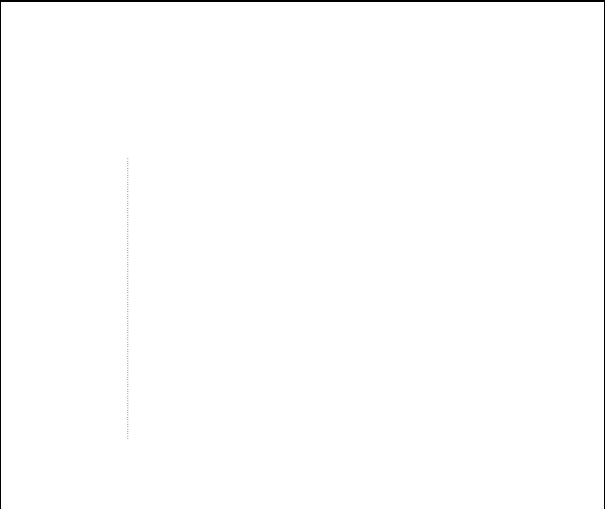
**Figure 5. Drain-source breakdown voltage**



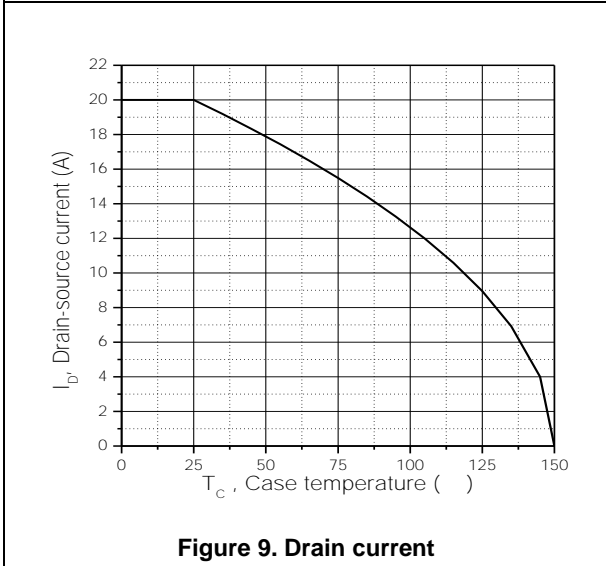
**Figure 6. Drain-source on-state resistance**



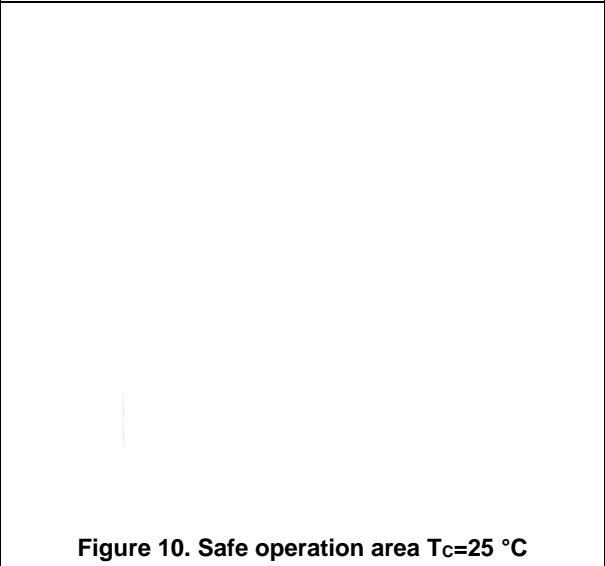
**Figure 7. Forward characteristic of body diode**



**Figure 8. Drain-source on-state resistance**

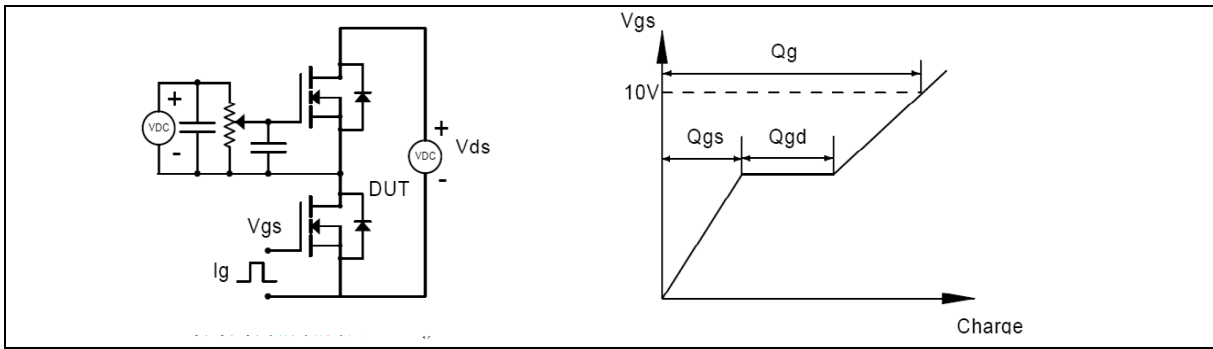


**Figure 9. Drain current**



**Figure 10. Safe operation area T<sub>C</sub>=25 °C**

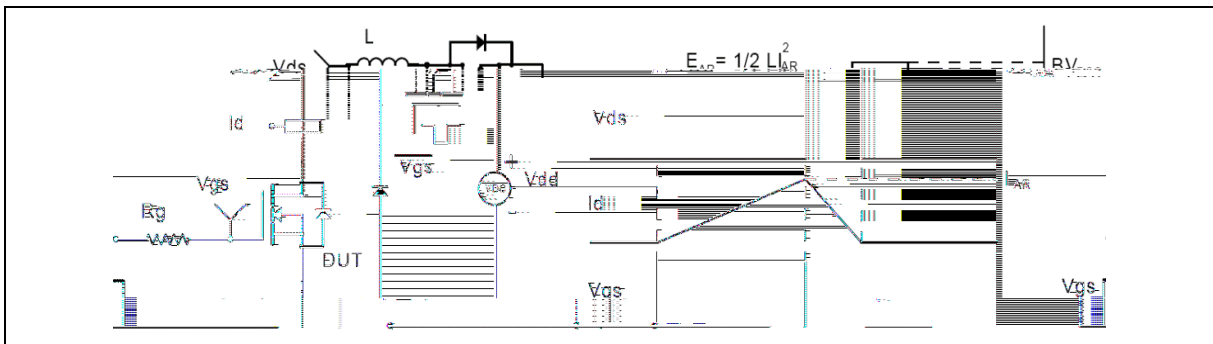
**Test circuits and waveforms**



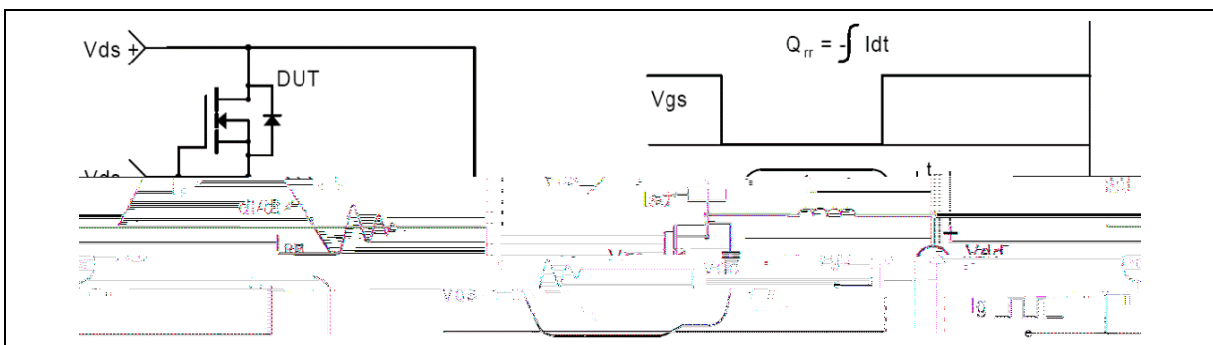
**Figure 1. Gate charge test circuit & waveform**



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

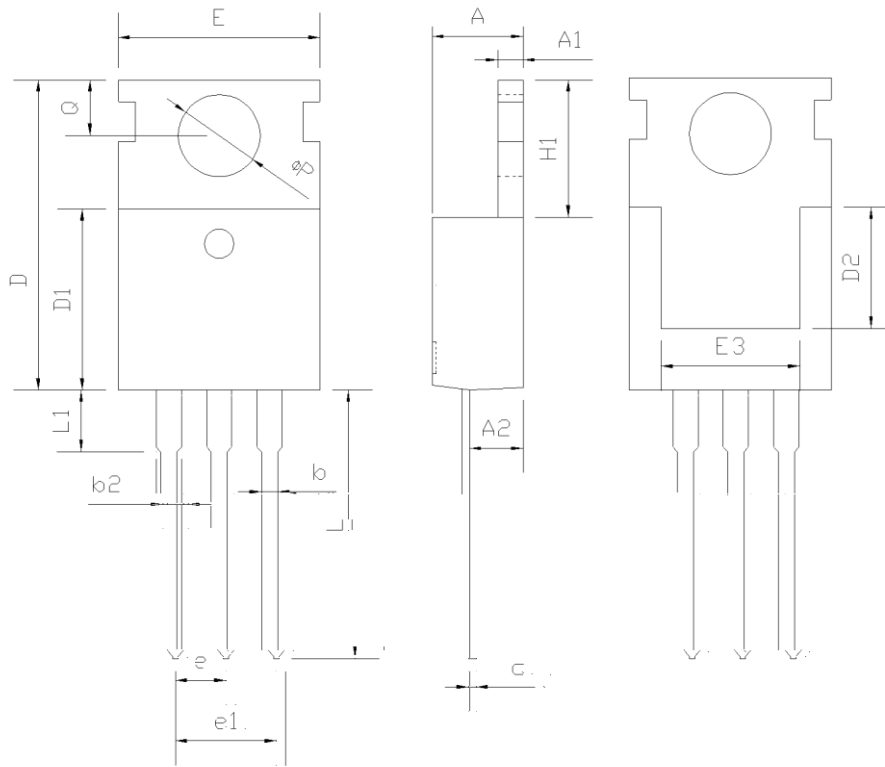


**Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms**



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

**Package Information**



Symbol	mm		
	Min	Nom	Max
A	4.37	4.57	4.77
A1	1.25	1.30	1.45
A2	2.20	2.40	2.60
b	0.70	0.80	0.95
b2	1.17	1.27	1.47
c	0.40	0.50	0.65
D	15.10	15.60	16.10
D1	8.80	9.10	9.40
D2	5.50	-	-
E	9.70	10.00	10.30
E3	7.00	-	-
e	2.54 BSC		
e1	5.08 BSC		
H1	6.25	6.50	6.85
L	12.75	13.50	13.80
L1	-	3.10	3.40
	3.40	3.60	3.80
Q	2.60	2.80	3.00

Version 1: TO220-P outline dimension

**Ordering Information**

Package Type	Units/ Tube	Tubes/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
TO220-P	50	20	1000	6	6000

**Product Information**

Product	Package	Pb Free	RoHS	Halogen Free
OSG60R180PF	TO220	yes	yes	yes