

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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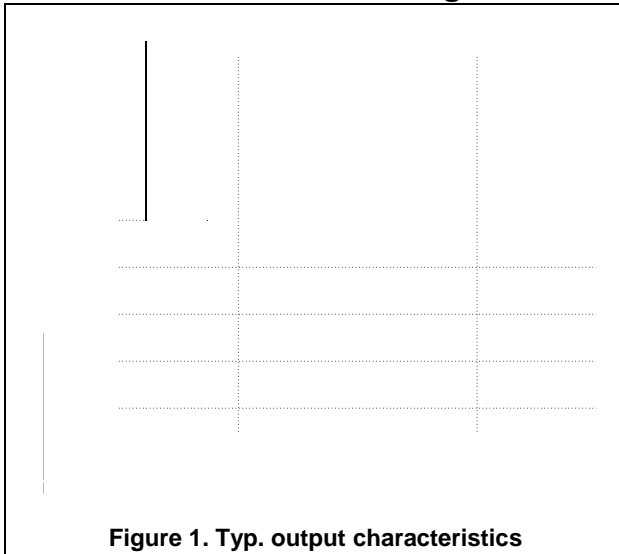
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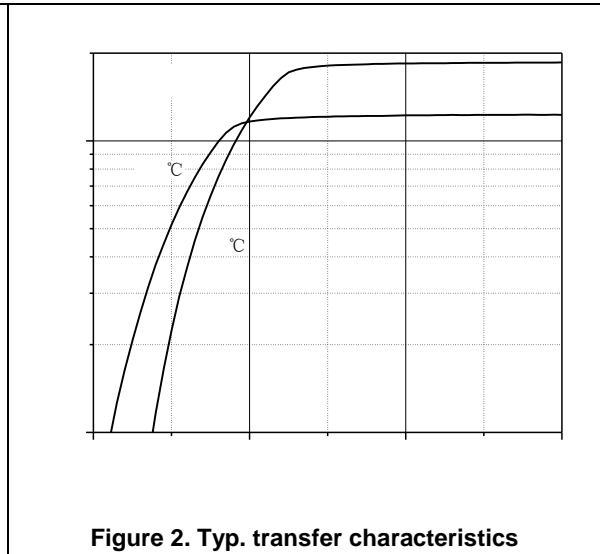
**Dynamic Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	$C_{iss}$		702.7		pF	$V_{GS}=0\text{ V}$ , $V_{DS}=50\text{ V}$ , Hz
Output capacitance	$C_{oss}$		52.2		pF	
Reverse transfer capacitance	$C_{rss}$		2.5		pF	
Turn-on delay time	$t_{d(on)}$		23.7		ns	$V_{GS}=10\text{ V}$ , $V_{DS}=520\text{ V}$ , $R_G=25$ $I_D=10.5\text{ A}$
Rise time	$t_r$		24.1			

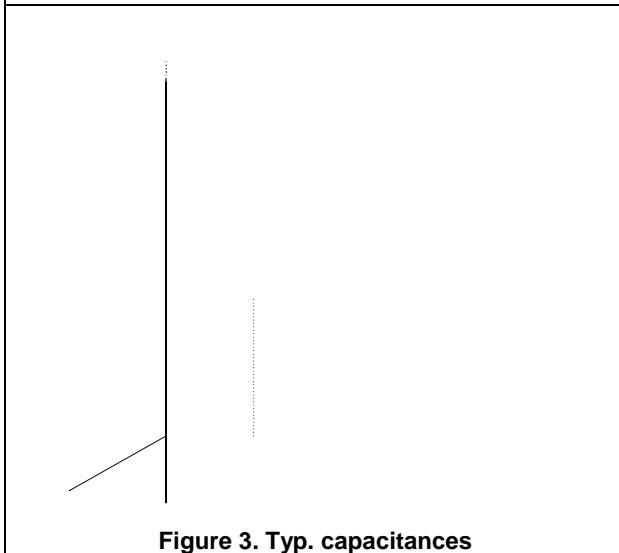
**Electrical Characteristics Diagrams**



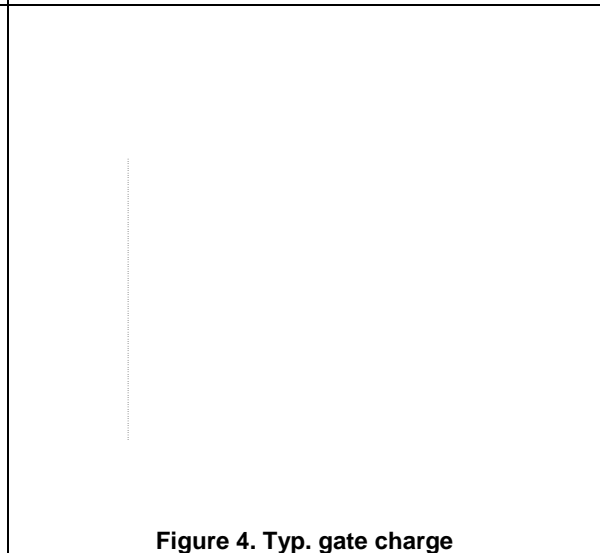
**Figure 1. Typ. output characteristics**



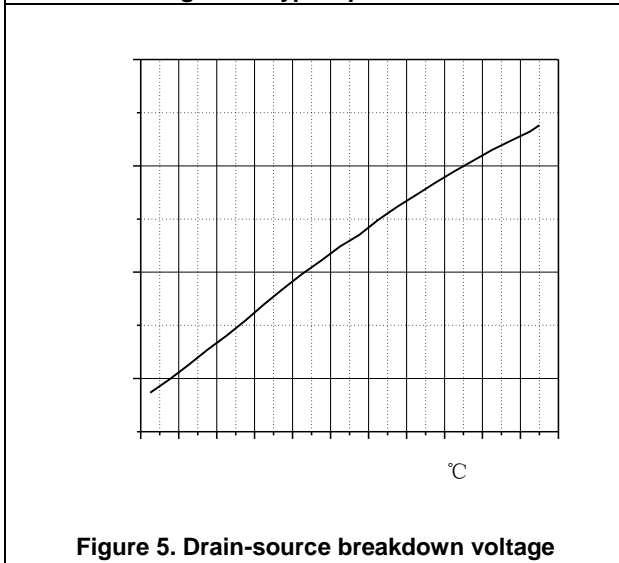
**Figure 2. Typ. transfer characteristics**



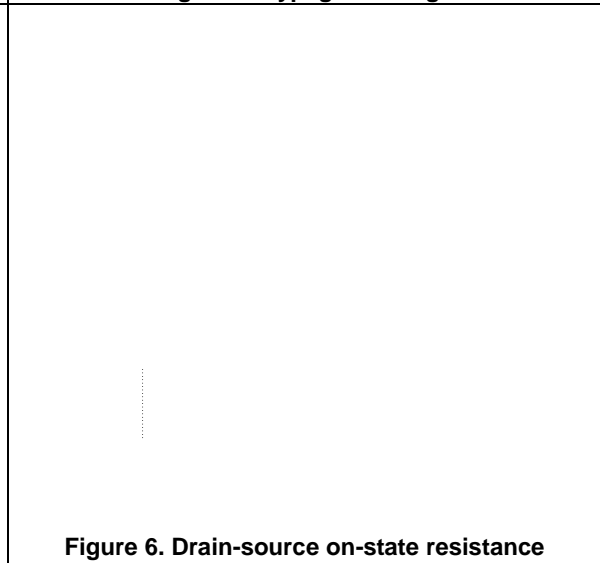
**Figure 3. Typ. capacitances**



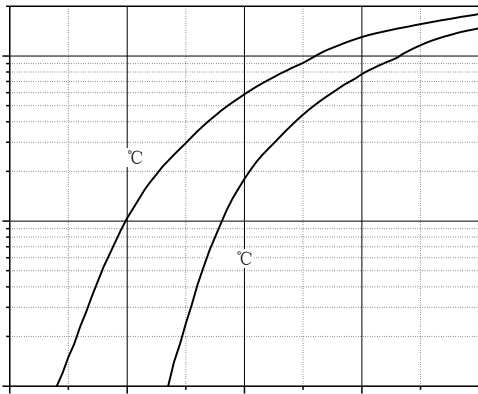
**Figure 4. Typ. gate charge**



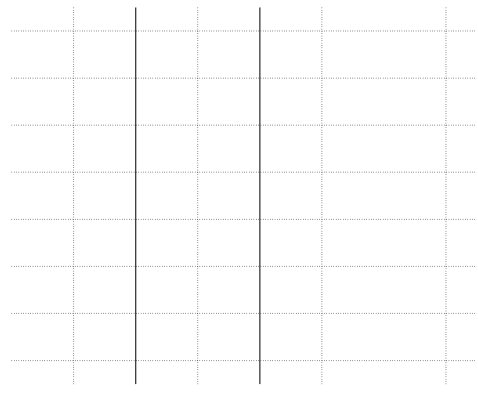
**Figure 5. Drain-source breakdown voltage**



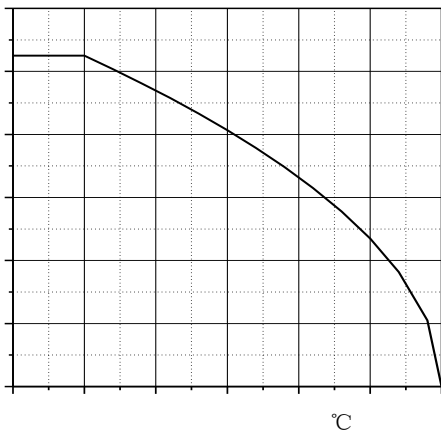
**Figure 6. Drain-source on-state resistance**



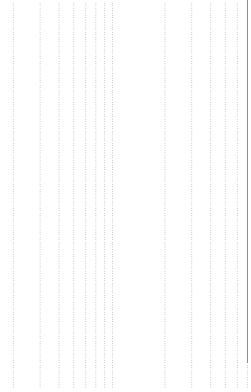
**Figure 7. Forward characteristic of body diode**



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

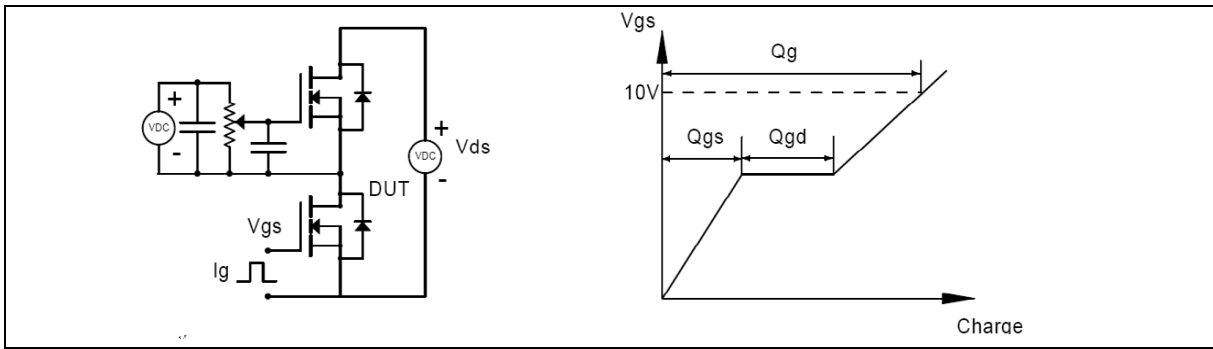


**Figure 9. Drain current**



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

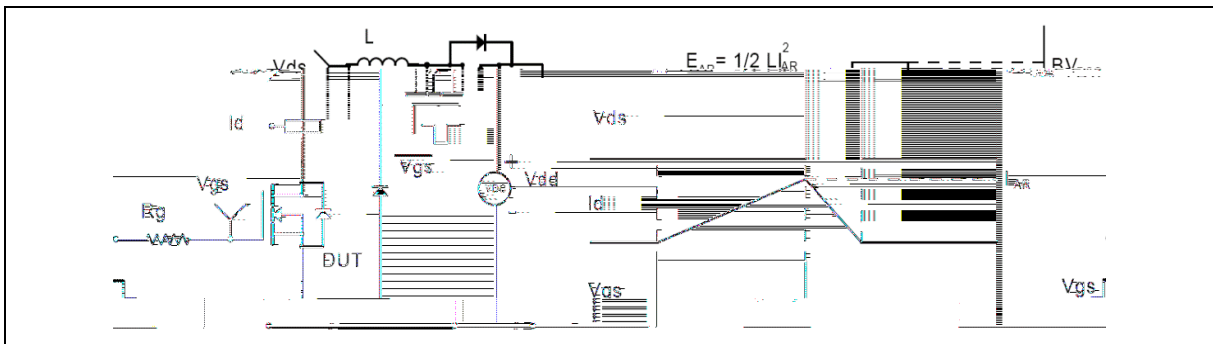
**Test circuits and waveforms**



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



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

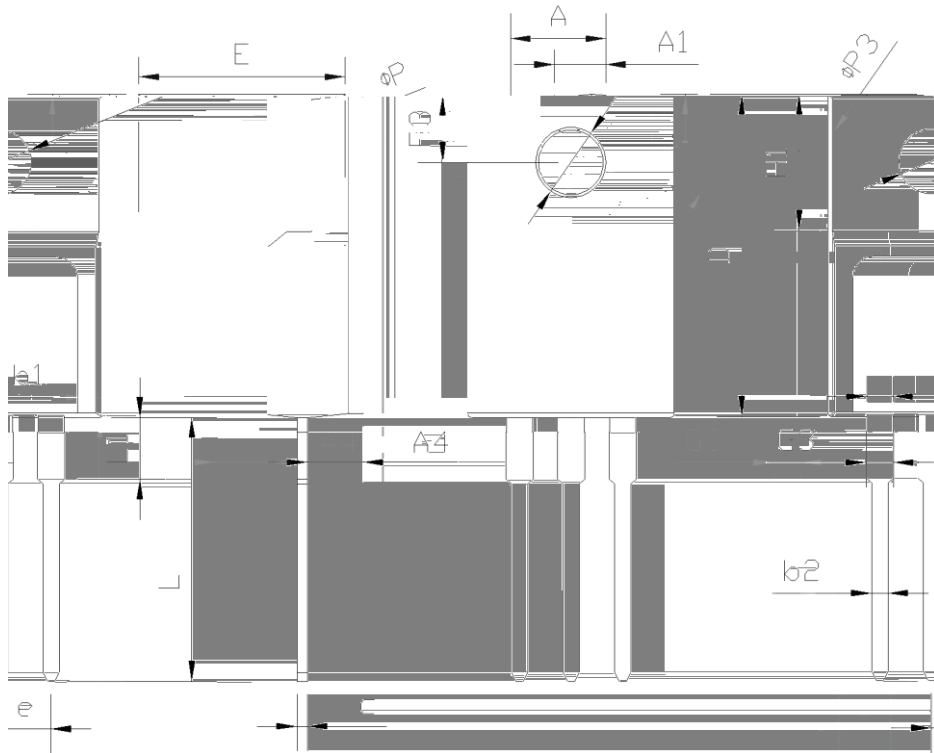


**Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms**



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

**Package Information**



Symbol	mm		
	Min	Nom	Max
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

**Ordering Information**

Package Type	Units/ Tube	Tubes/ Inner Box	Units/ Inner Box	Inner Boxes/ Carton Box	Units/ Carton Box
TO220F-C	50	20	1000	6	6000

**Product Information**

Product	Package	Pb Free	RoHS	Halogen Free
OSG65R420FF	TO220F	yes	yes	yes

