


**OSG60R096HSF**   
Enhancement Mode N-Channel Power MOSFET

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

Parameter	Symbol	Value	Unit
Drain-source voltage	$V_{DS}$	600	V
Gate-source voltage	$V_{GS}$	$\pm 30$	V

Continuous drain current<sup>1)</sup>,  $T_C=25$  °C

**Dynamic Characteristics**

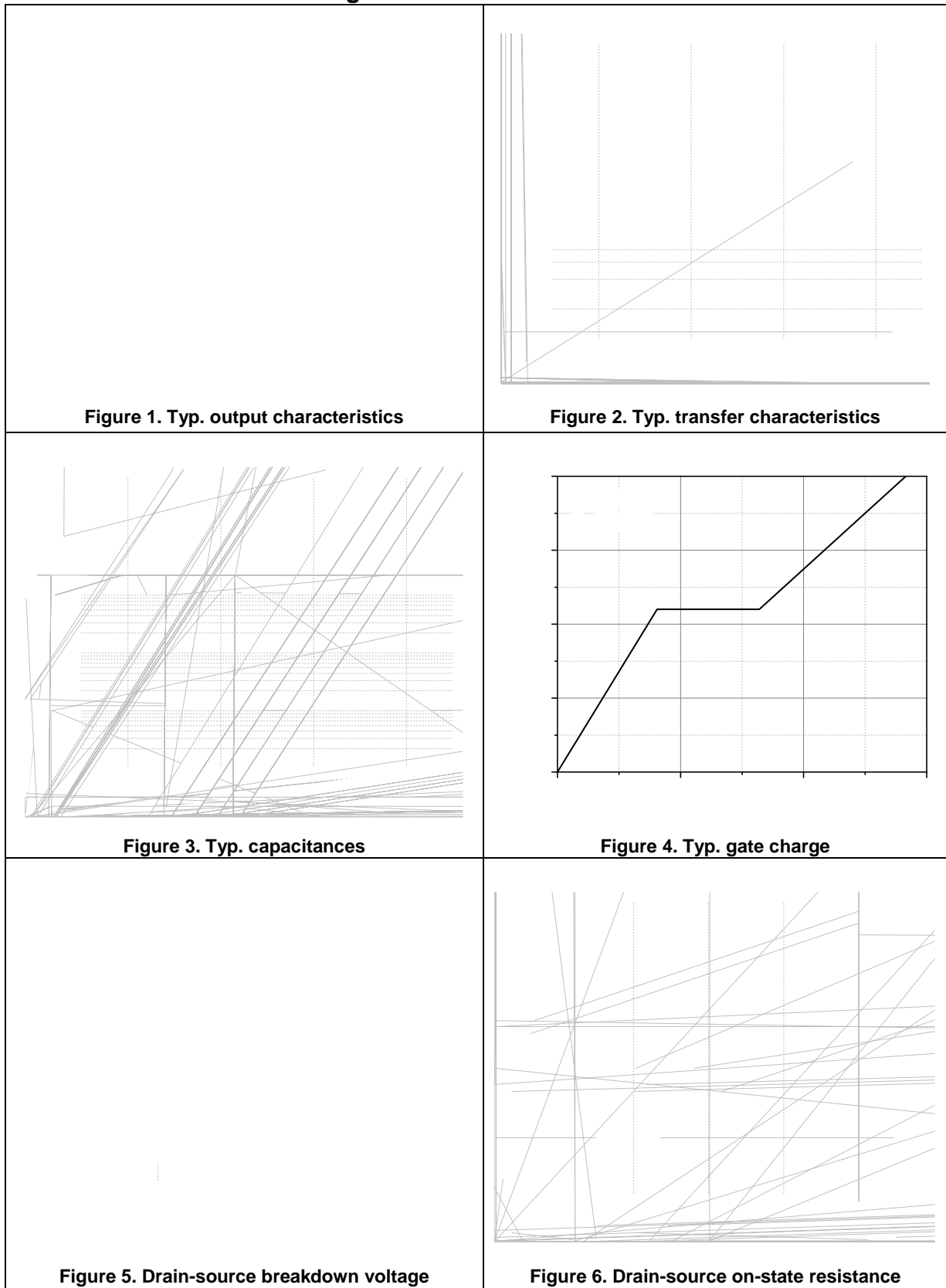
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Input capacitance	$C_{iss}$		3190.3		pF	$V_{GS}=0\text{ V}$ , $V_{DS}=50\text{ V}$ , 00 KHz
Output capacitance	$C_{oss}$		280.1		pF	
Reverse transfer capacitance	$C_{rss}$		1.69		pF	
Turn-on delay time	$t_{d(on)}$		36.8		ns	$V_{GS}=10\text{ V}$ , $V_{DS}=400\text{ V}$ , $R_G$ $I_D=20\text{ A}$
Rise time	$t_r$		34.7		ns	
Turn-off delay time	$t_{d(off)}$		104.7		ns	
Fall time	$t_f$		7.7		ns	

**Gate Charge Characteristics**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
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Total gate charge

### Electrical Characteristics Diagrams



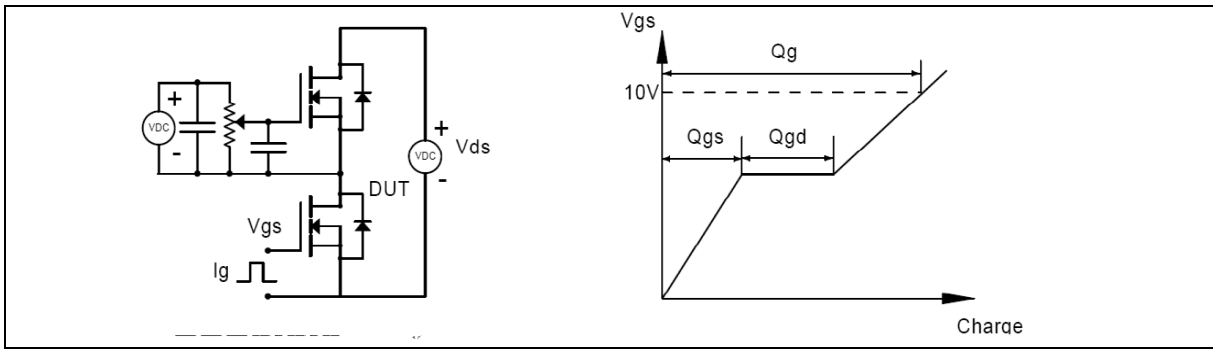


**Figure 7. Forward characteristic of body diode**



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

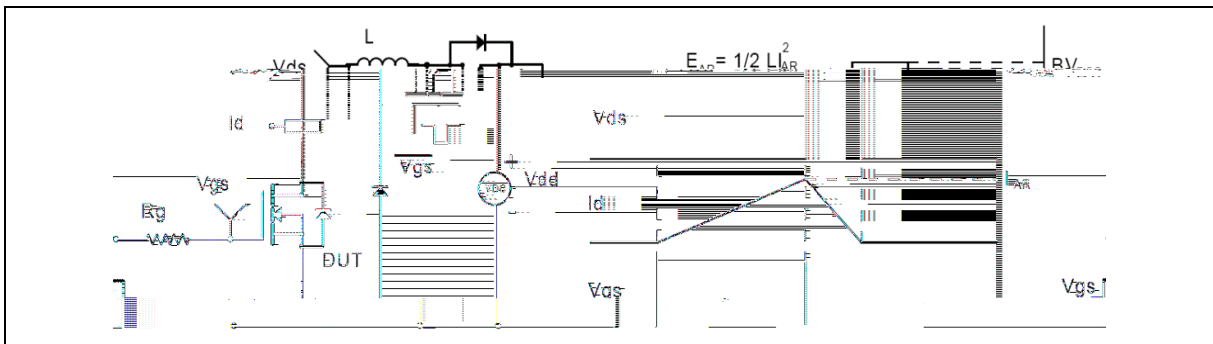
**Test circuits and waveforms**



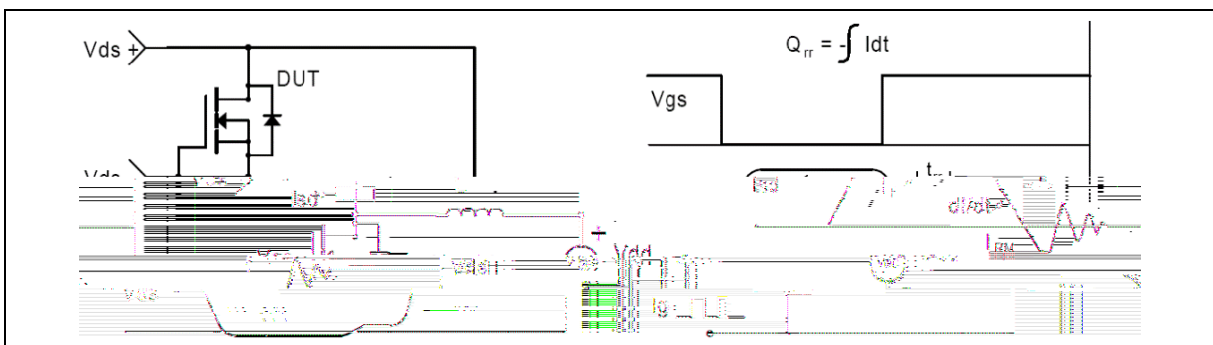
**Figure 1. Gate charge test circuit & waveform**



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

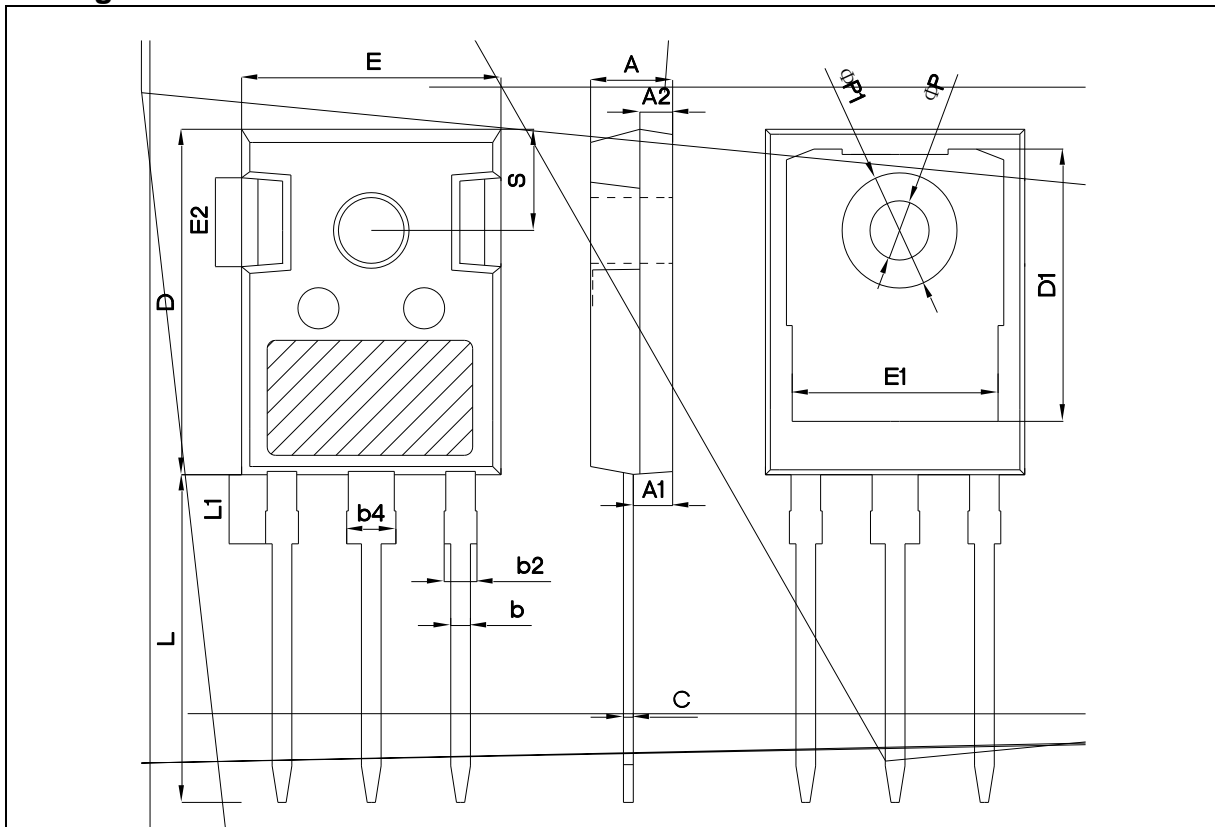


**Figure 3. Unclamped inductive switching (UIS) test circuit & waveforms**



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

**Package Information**



Symbol	mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.21	2.41	2.59
A2	1.85	2.00	2.15
b	1.11	1.21	1.36
b2	1.91	2.01	2.21
b4	2.91	3.01	3.21
c	0.51	0.61	0.75
D	20.80	21.00	21.30
D1	16.25	16.55	16.85
E	15.50	15.80	16.10
E1	13.00	13.30	13.60
E2	4.80	5.00	5.20
E3	2.30	2.50	2.70
e	5.44 BSC		
L	19.82	19.92	20.22
L1	-	-	4.30
	3.40	3.60	3.80
	-	-	7.30
S	6.15 BSC		

Version 1:, TO247-C outline dimension

## Package Information

Symbol	mm		
	Min	Nom	Max
A	4.90	5.00	5.10
A1	2.31	2.41	2.51
A2	1.90	2.00	2.10
a	0.00	-	0.15
a'	0.00	-	0.15
b	1.16	-	1.26
b1	1.15	1.2	1.22
b2	1.96	-	2.06
b3	1.95	2.00	2.02
b4	2.96	-	3.06
b5	2.96	3.00	3.02
b6	-	-	2.25
b7	-	-	3.25
c	0.59	-	0.66
c1	0.58	0.60	0.62
D	20.90	21.00	21.10
D1	16.25	16.55	16.85
D2	1.05	1.17	1.35
E	15.70	15.80	15.90
E1	13.10	13.30	13.50
E2	4.40	4.50	4.60
E3	2.40	2.50	2.60
e	5.436 BSC		
L	19.80	19.92	20.10
L1	-	-	4.30
M	0.35	-	0.95
P	3.40	3.50	3.60
P1	7.00	-	7.40
P2	2.40	2.5	2.6
Q			



**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
TO247-J	30	20	600	5	3000

**Product Information**

Product	Package	Pb Free	RoHS	Halogen Free
OSG60R096HSF	TO247	yes	yes	yes