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® S series is optimized for its switching characteristics to achieve aggressive EMI standards. It is easy to use for smaller power supply systems t

GreenMOS®

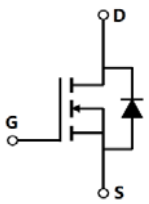
- Low $R_{DS(ON)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity

RoHS compliant

- LED lighting
- Charger
- Adapter
- Telecom power
- Server power
- Solar/UPS

$V_{DS,\ min}$ @ $T_{j(max)}$	650	V
$I_{D,\ pulse}$	6	A
$R_{DS(ON),\ max}$ @ V_{GS}=10V	2.2	Ω
Q_g	4.8	nC

OSG60R2K2DSF	TO252	OSG60R2K2DS



at T_j=25°C unless otherwise noted

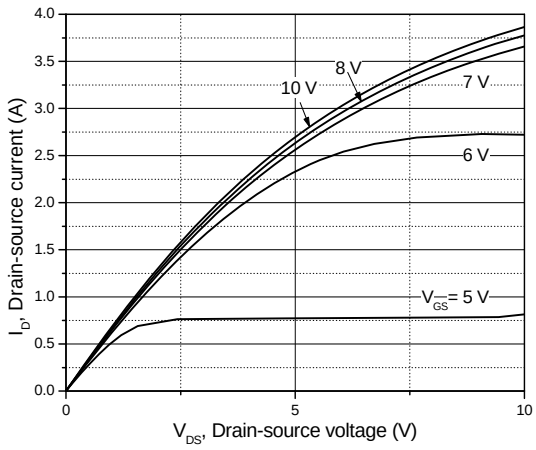
Drain-source voltage	V_{DS}	650	V
Gate-source voltage	V_{GS}	±30	V
Continuous drain current[1], T_C=25 °C	I_D	2	A
Continuous drain current[1], T_C=100 °C		1.25	
Pulsed drain current[2], T_C=25 °C	$I_{D, pulse}$	6	A
Continuous diode forward current[1], T_C=25 °C	I_S	2	A
Diode pulsed current[2], T_C=25 °C	$I_{S, pulse}$	6	A
Power dissipation[3], T_C=25 °C	P_D	20	W
Single pulsed avalanche energy[5]	E_{AS}	60	mJ
MOSFET dv/dt ruggedness, V_{DS}=0…480 V	dv/dt	50	V/ns
Reverse diode dv/dt, V_{DS}=0…480 V, I_{SD}≤I_D	dv/dt	15	V/ns
Operation and storage temperature	T_{stg}, T_j	-55 to 150	°C

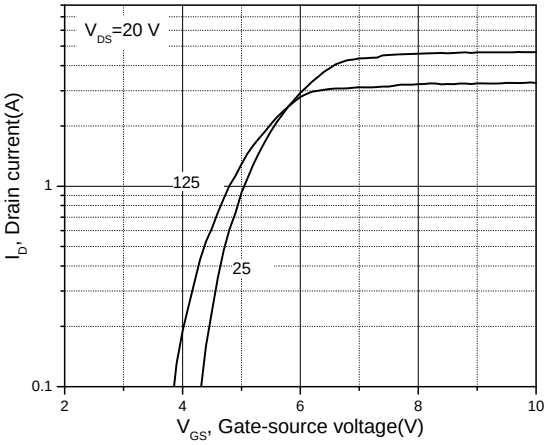
Thermal resistance, junction-case	$R_{\theta JC}$	6.3	°C/W
Thermal resistance, junction-ambient[4]	$R_{\theta JA}$	62	°C/W

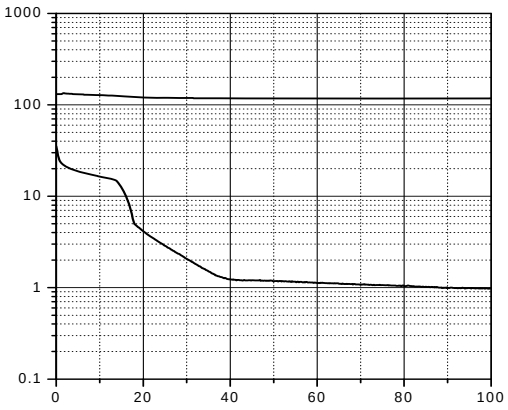
at T_j=25°C unless otherwise specified

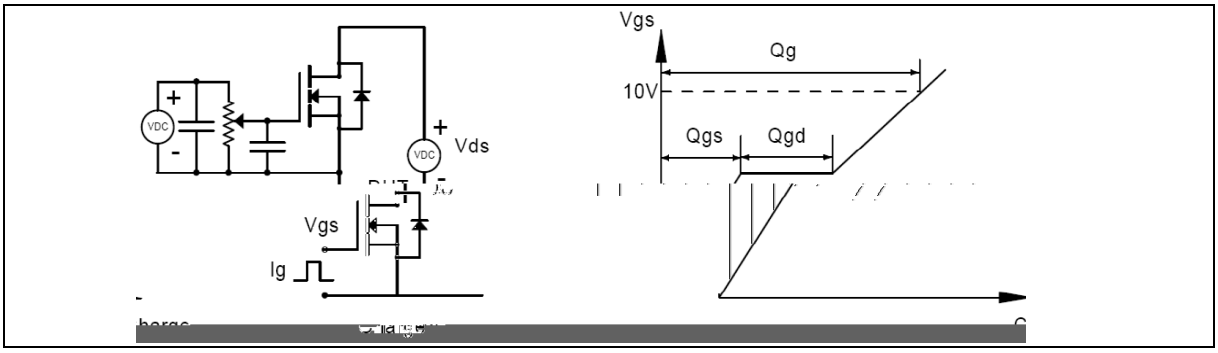
Drain-source breakdown voltage	BV_{DSS}	600			V	V_{GS}=0 V, I_D=250 μA
		650				V_{GS}=0 V, I_D=250 μA, T_j=150 °C
Gate threshold voltage	$V_{GS(th)}$	2.9		3.9	V	V_{DS}=V_{GS}, I_D=250 μA
Drain-source on-state resistance	$R_{DS(ON)}$		1.6	2.2	Ω	V_{GS}=10 V, I_D=1 A
			3.6			V_{GS}=10 V, I_D=1 A, T_j=150 °C
Gate-source leakage current	I_{GSS}			100	nA	V_{GS}=30 V
				-100		V_{GS}=-30 V
Drain-source leakage current	I_{DSS}			1	μA	V_{DS}=600 V, V_{GS}=0 V

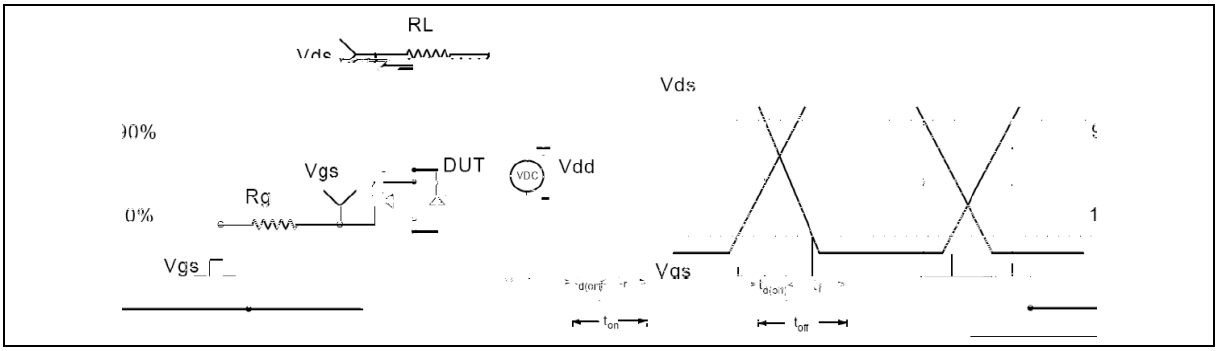
Input capacitance	C_{iss}		117.6		pF	V_{GS}

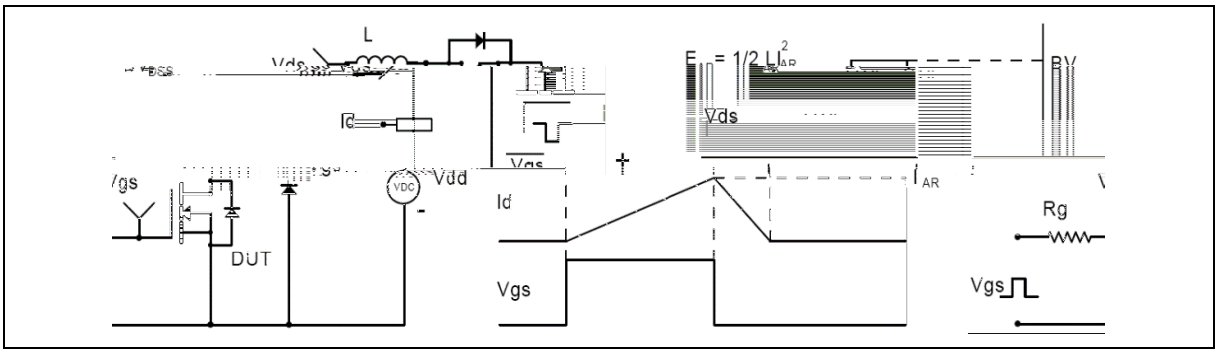

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
5
10
8 V
10 V
7 V
6 V
V_GS= 5 V
I_D, Drain-source current (A)
V_DS, Drain-source voltage (V)

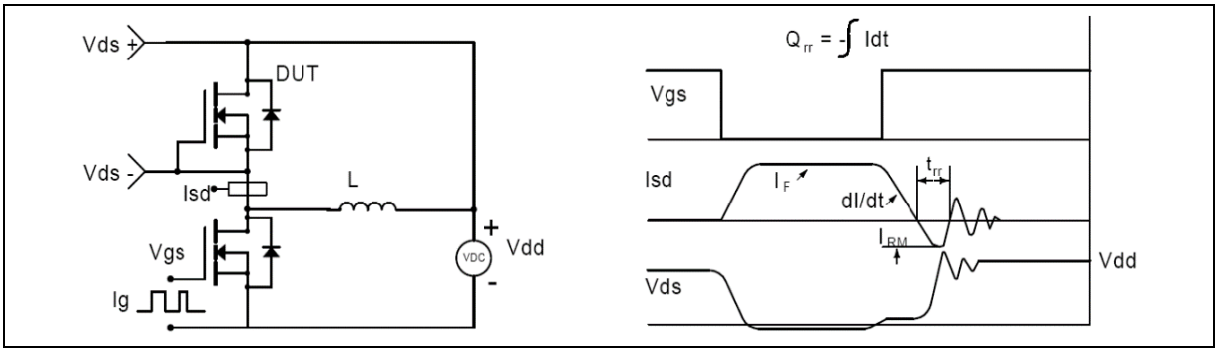

V_DS=20 V
1
0.1
2
4
6
8
10
125
25
I_D, Drain current(A)
V_GS, Gate-source voltage(V)

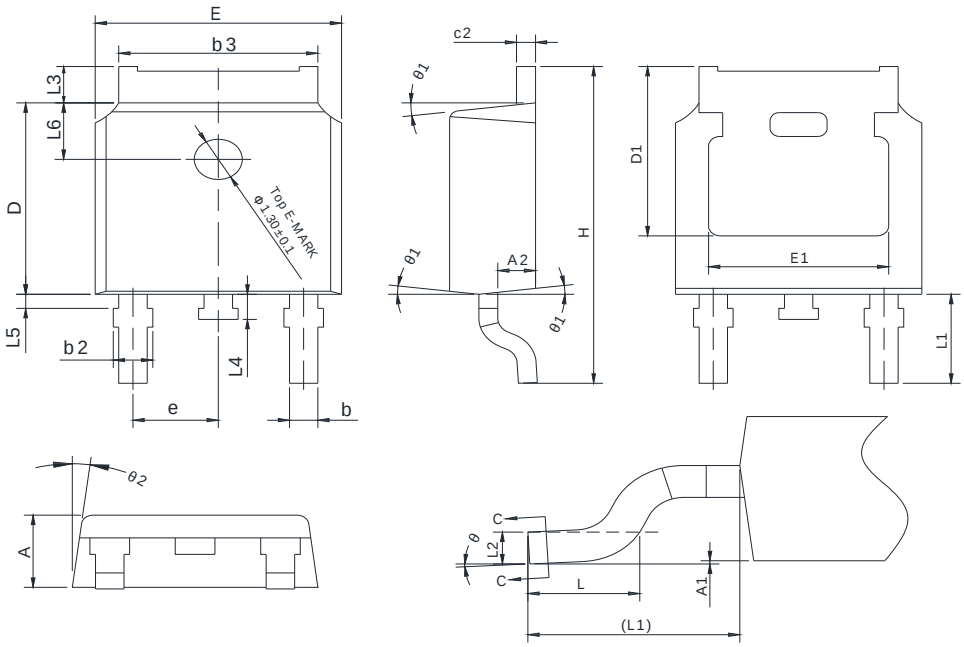

1000
100
10
1
0.1
0
20
40
60
80
100


VDC
Vds
Vgs
Ig
Vgs
Qg
10V
Qgs
Qgd


RL
Vds
Vgs
DUT
Rg
Vdd
VDC
Vgs
Vds
Vgs
t_{on}
t_{off}


L
Vgs
DUT
VDC
Vdd
Id
Vgs
$E_{AR} = 1/2\ LI_{AR}^2$
BV
Vds
I_{AR}
Rg
Vgs


Vds +
DUT
Vds -
Isd
L
Vgs
Ig
VDC
Vdd
$Q_{rr} = \int Idt$
Vgs
Isd
I_F
dI/dt
t_{rr}
I_{RM}
Vds
Vdd



Symbol	mm		
	Min	Nom	Max
A	2.20	2.30	2.38
A1	0.00	-	0.10
A2	0.90	1.01	1.10
b	0.72	-	0.85
b1	0.71	0.76	0.81
b2	0.72	-	0.90
b3	5.13	5.33	5.46
c	0.47	-	0.60
c1	0.46	0.51	0.56
c2	0.47	-	0.60
D	6.00	6.10	6.20
D1	5.25	-	-
E	6.50	6.60	6.70
E1	4.70	-	-
e	2.186	2.286	2.386
H	9.80	10.10	10.40
L	1.40	1.50	1.70
L1	2.90REF		
L2	0.508BSC		
L3	0.90	-	1.25
L4	0.60	0.80	1.00
L5	0.15	-	0.75
L6	1.80REF		
θ	0°	-	8°
θ1	5°	7°	9°
θ2	5°	7°	9°

Version 1: TO252-J package outline dimension

TO252-J	2500	2	5000	5	25000

OSG60R2K2DSF	TO252	yes	yes	yes

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