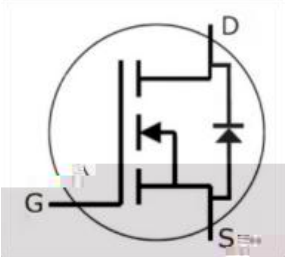
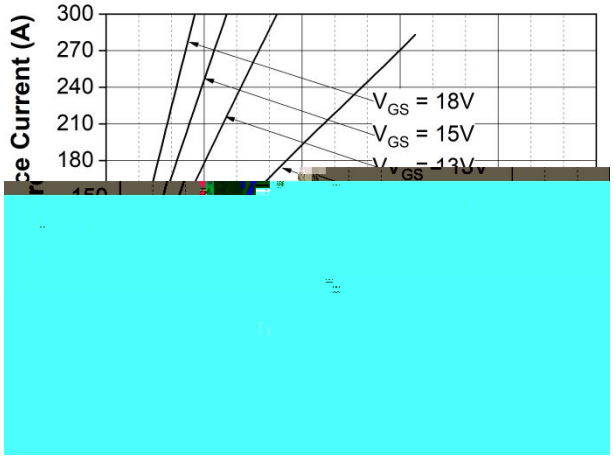
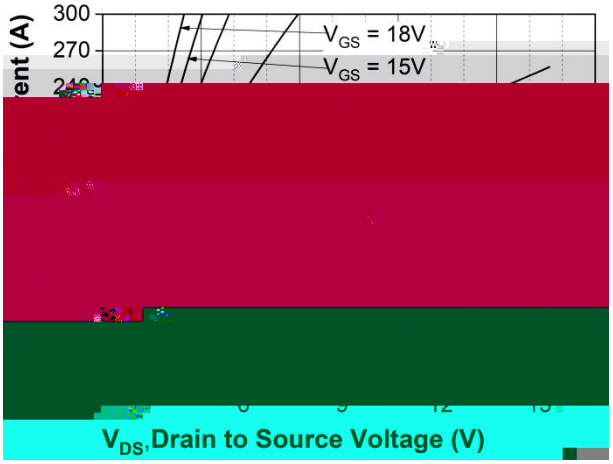
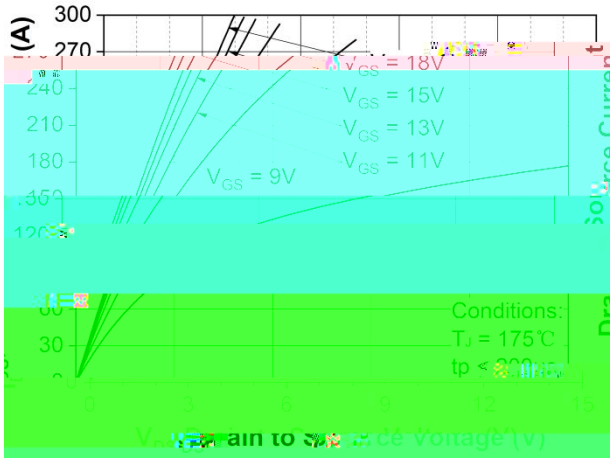

D
G
S

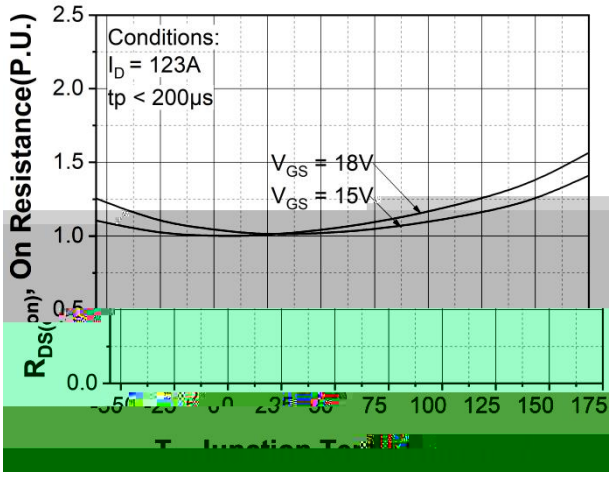
		≤		

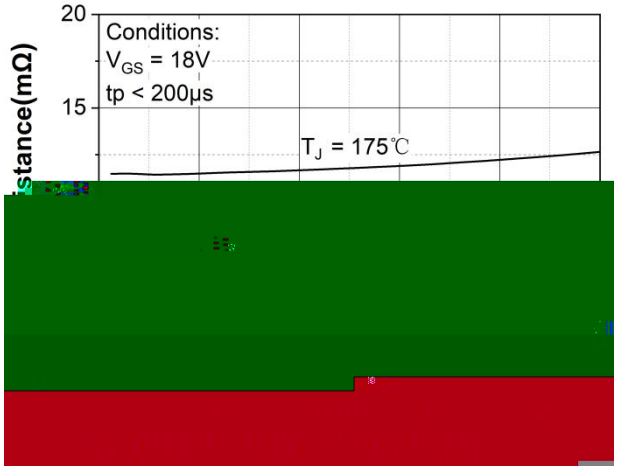
				≤	


300
270
240
210
180
V_{GS} = 18V
V_{GS} = 15V

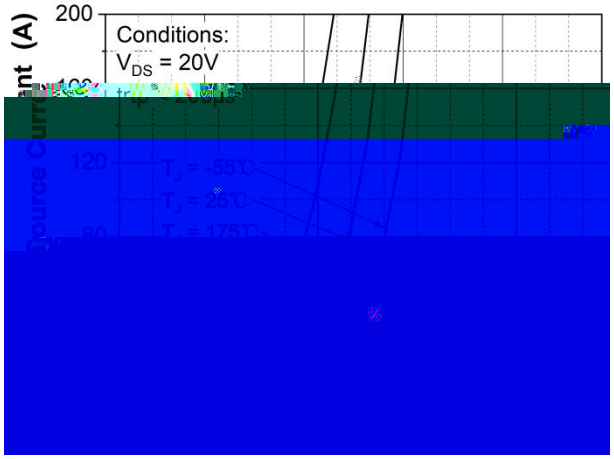

300
270
V_{GS} = 18V
V_{GS} = 15V
V_{DS},Drain to Source Voltage (V)


300
270
240
210
180
V_{GS} = 18V
V_{GS} = 15V
V_{GS} = 13V
V_{GS} = 11V
V_{GS} = 9V
Conditions:
T_J = 175℃
30
0
0
3
6
9
12
15

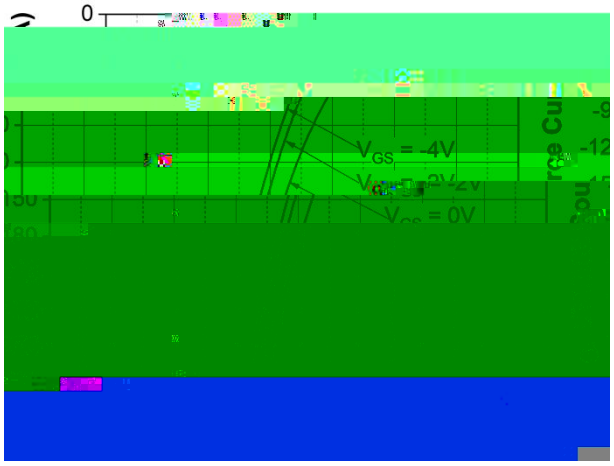

2.5
2.0
1.5
1.0
0.5
0.0
Conditions:
I_D = 123A
tp < 200μs
V_{GS} = 18V
V_{GS} = 15V
On Resistance(P.U.)
75
100
125
150
175


20
15
Conditions:
V_{GS} = 18V
tp < 200μs
T_J = 175℃

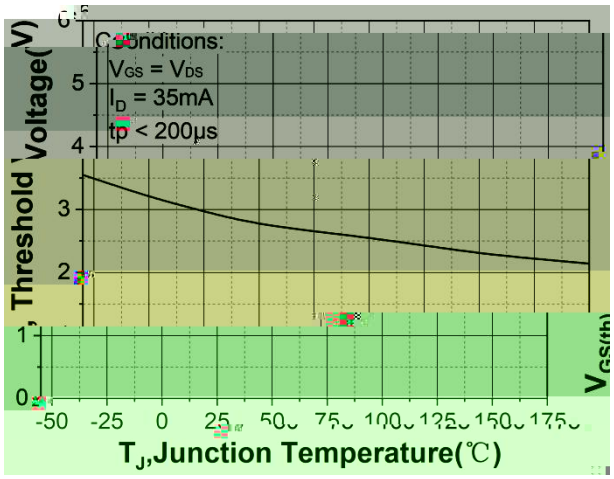
20
Conditions:

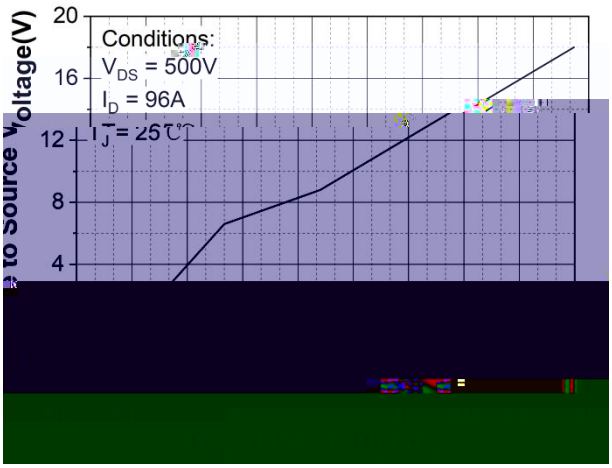

Conditions:
V_{DS} = 20V
200
120
T_J = -55℃
T_J = 25℃
T_J = 175℃

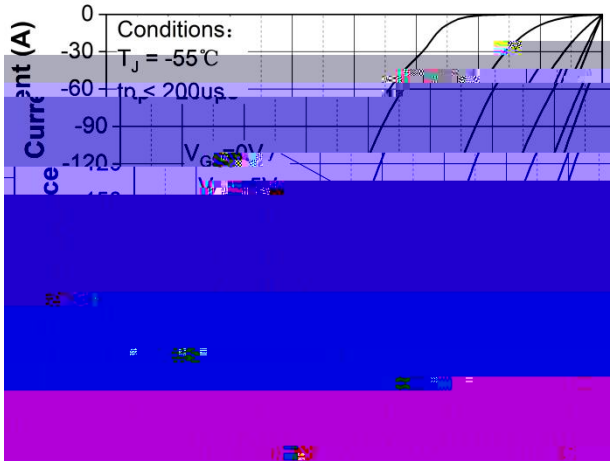
0

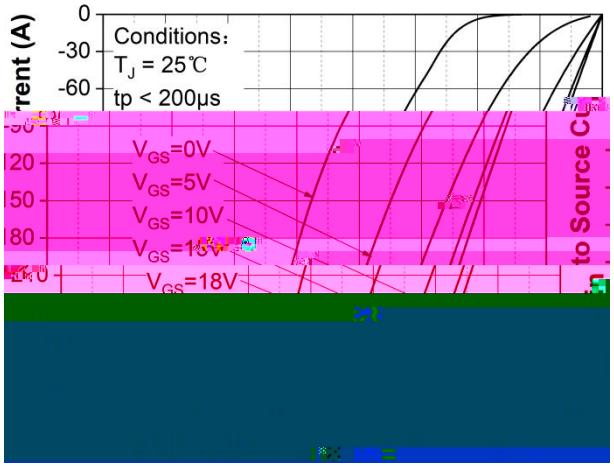

0
V_{GS} = -4V
V_{GS} = 0V

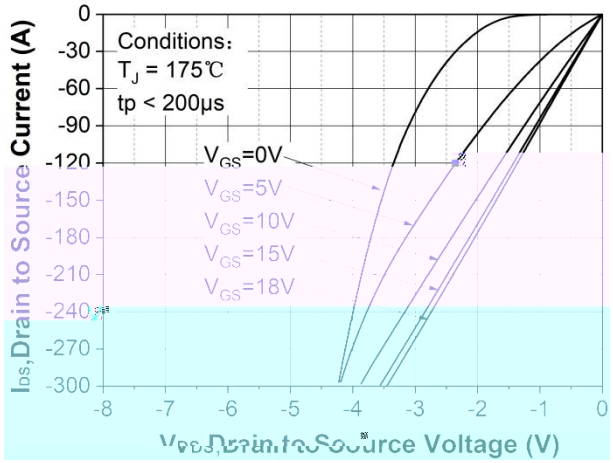
0

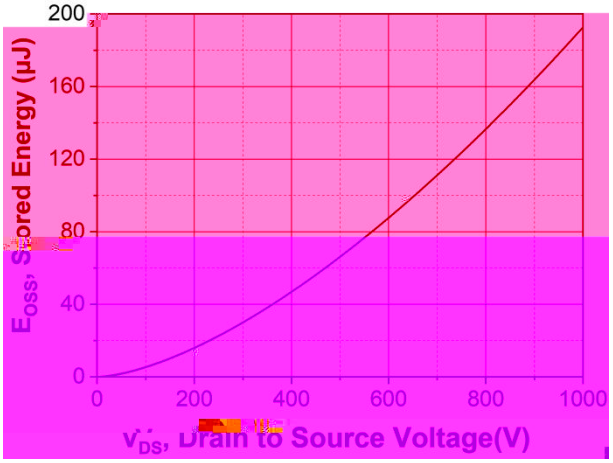

Conditions:
V_{GS} = V_{DS}
I_D = 35mA
tp < 200μs
6
5
4
3
2
1
0
-50
-25
0
25
50
75
100
125
150
175
T_J,Junction Temperature(℃)

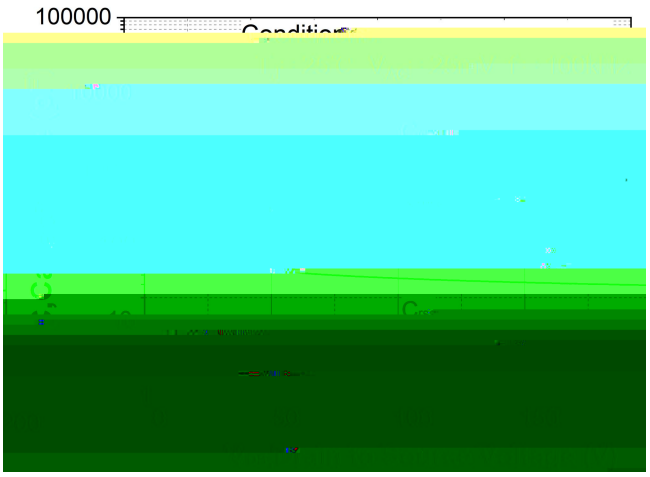

Conditions:
V_{DS} = 500V
I_D = 96A
T_J = 25℃
20
16
12
8
4

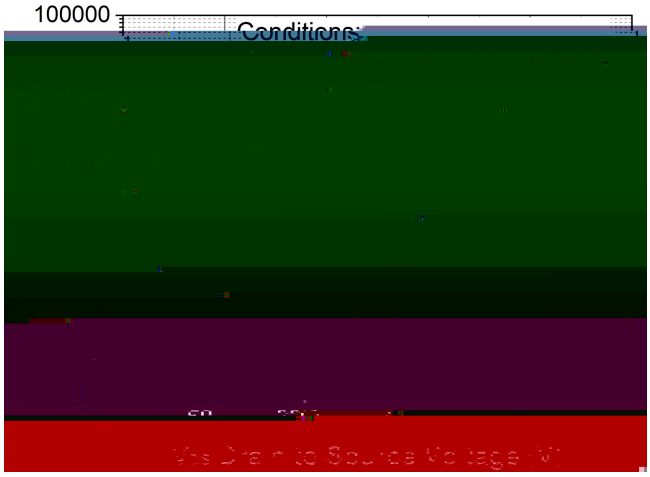

Conditions:
T_J = -55℃
tp < 200μs
V_{GS}=0V
V_{GS}=5V

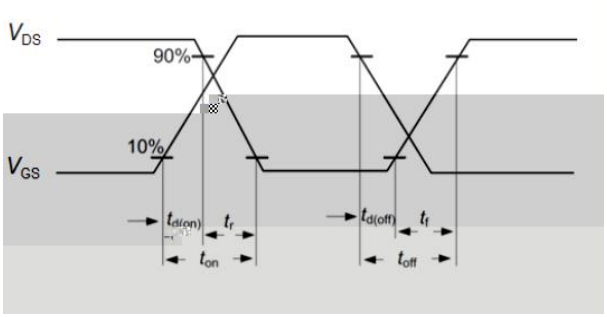

Conditions:
T_J = 25℃
tp < 200μs
V_{GS}=0V
V_{GS}=5V
V_{GS}=10V
V_{GS}=15V
V_{GS}=18V

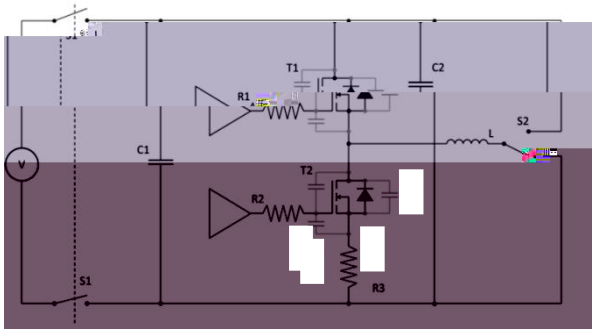

Conditions:
T_J = 175℃
tp < 200μs
V_{GS}=0V
V_{GS}=5V
V_{GS}=10V
V_{GS}=15V
V_{GS}=18V
I_{DS},Drain to Source Current (A)
0
-30
-60
-90
-120
-150
-180
-210
-240
-270
-300
-8
-7
-6
-5
-4
-3
-2
-1
0

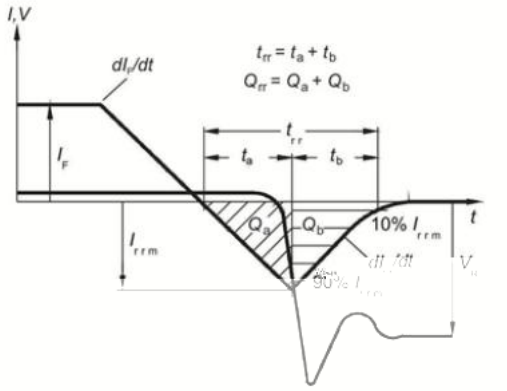

E_{OSS}, Stored Energy (μJ)
200
160
120
80
40
0
0
200
400
600
800
1000
V_{DS}, Drain to Source Voltage(V)


100000


100000


V_{DS}
90%
10%
V_{GS}
$t_{d(on)}$
t_r
t_{on}
$t_{d(off)}$
t_f
t_{off}


T1
C2
R1
S2
L
C1
V
T2
R2
R3
S1


I,V
dI_F/dt
$t_{rr} = t_a + t_b$
$Q_{rr} = Q_a + Q_b$
t_{rr}
t_a
t_b
I_F
Q_a
Q_b
10% I_{rrm}
t
I_{rrm}
dI_r/dt
90% I_{rrm}

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