TO-220 N

N-CHANNEL MOSFET in a TO-220 Plastic Package.

$V_{DS}$

| Parameter | N<br>Symbol | Rating | Unit |
|---|---|---|---|
| Drain-Source Voltage | $V_{DSS}$ | 60 | V |
| Drain Current | $I_D$(Tc=25 ) | 225 | A |
| Pulsed Drain Current | $I_{DM}$ | 646 | A |
| Gate-Source Voltage | $V_{GS}$ | ±20 | V |
| Single Pulsed Avalanche Energy L=0.5mH | $E_{AS}$ | 380 | mJ |
| Avalanche Current | $I_{AS}$ | 30.8 | A |
| Total Power Dissipation | $P_D$(Tc=25 ) | 125 | W |

Avala

| Parameter | N Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Total Gate Charge | $Q_g$(10V) | $V_{GS}$=10V $V_{DS}$=30V $I_D$=20A | | 60 | | nC |
| Total Gate Charge | $Q_g$(4.5V) | | | 23 | | |
| Gate Source Charge | $Q_{gs}$ | | | 16 | | |
| Gate Drain Charge | $Q_{gd}$ | | | 3 | | |
| Turn-On Delay Time | $t_{d(on)}$ | $V_{GS}$=10V $V_{DS}$=20V $R_L$=1Ω $R_{GEN}$=3Ω | | 13 | | ns |
| Turn-On Rise Time | $t_r$ | | | 4 | | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 47 | | |
| Turn-Off Fall Time | $t_f$ | | | 6.5 | | |

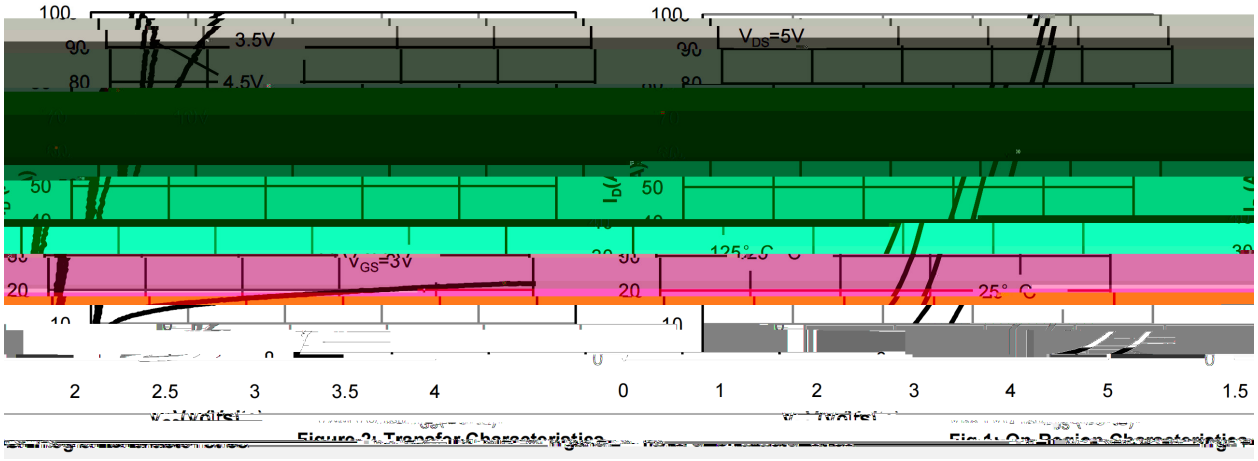
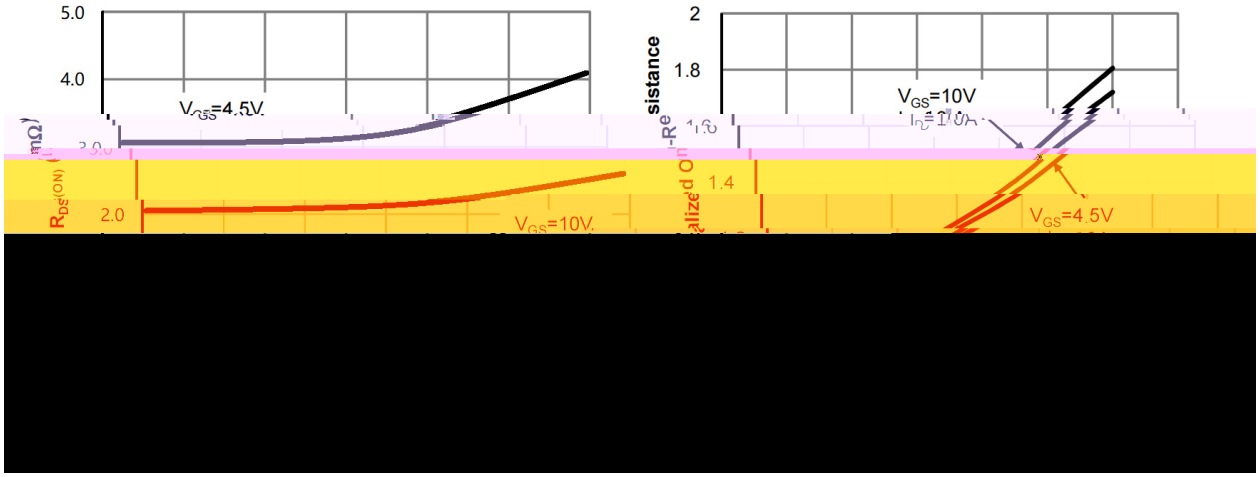



Figure 2: Transfer Characteristics

Fig 4: On-Region Characteristics



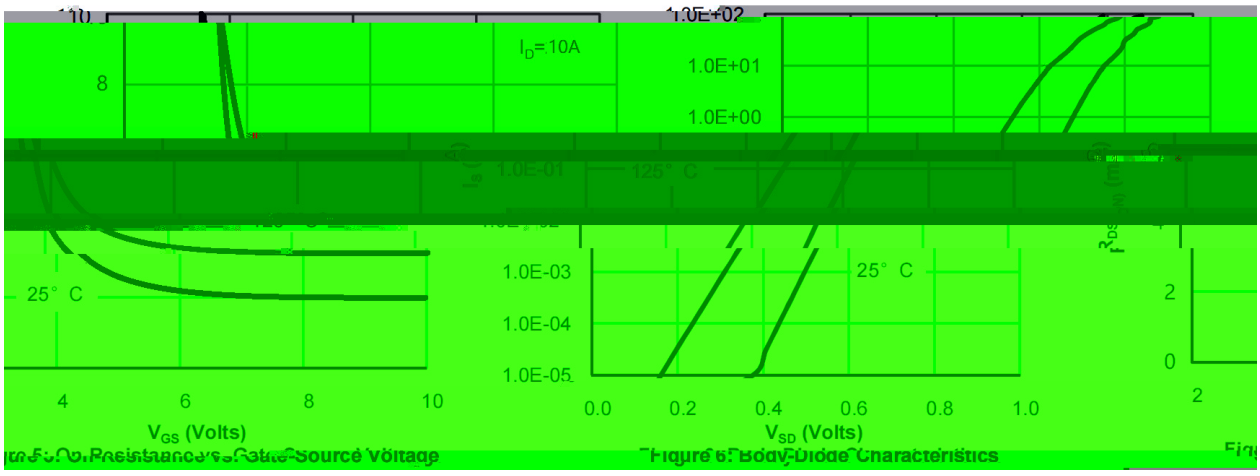
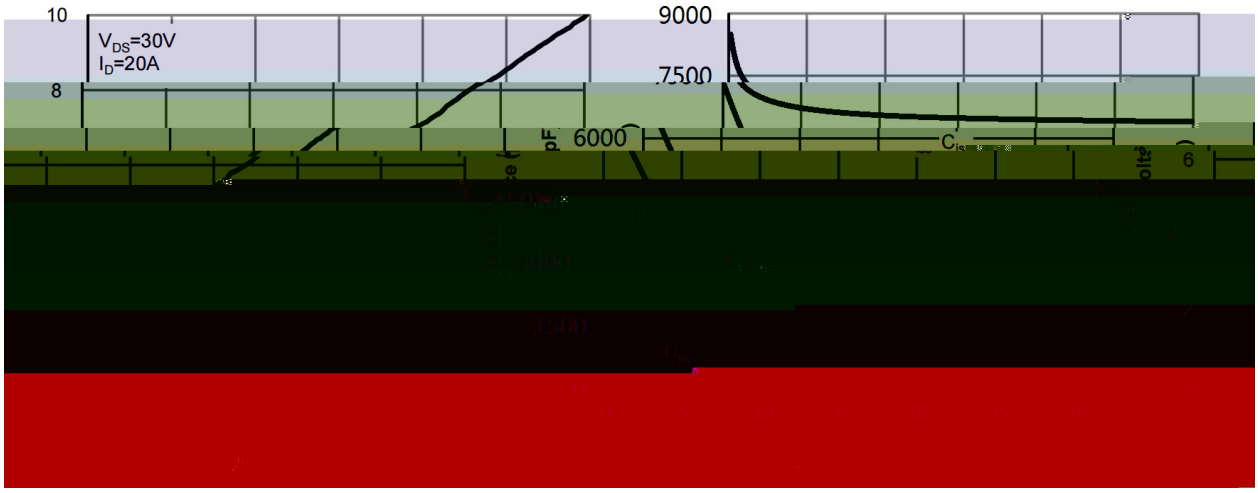
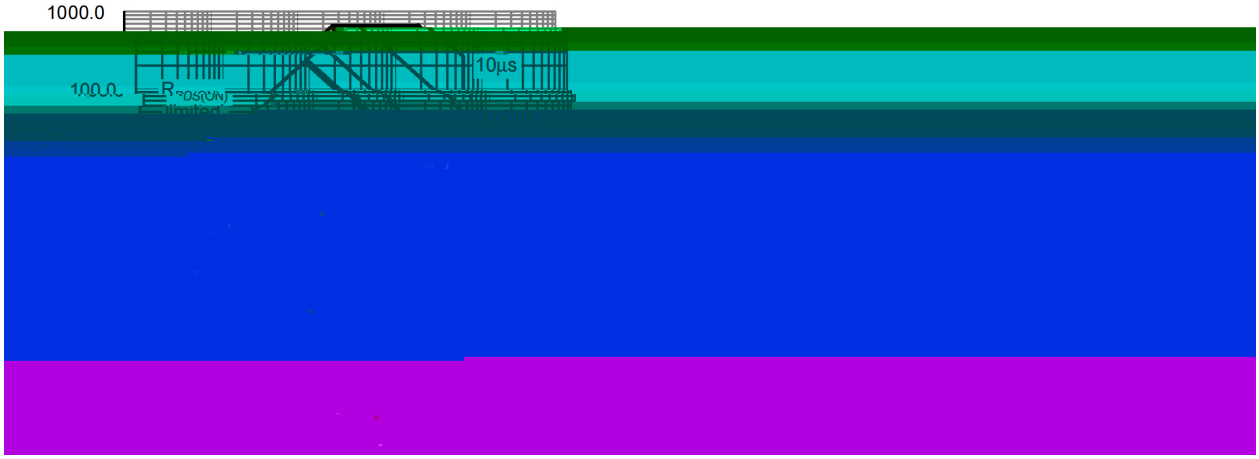
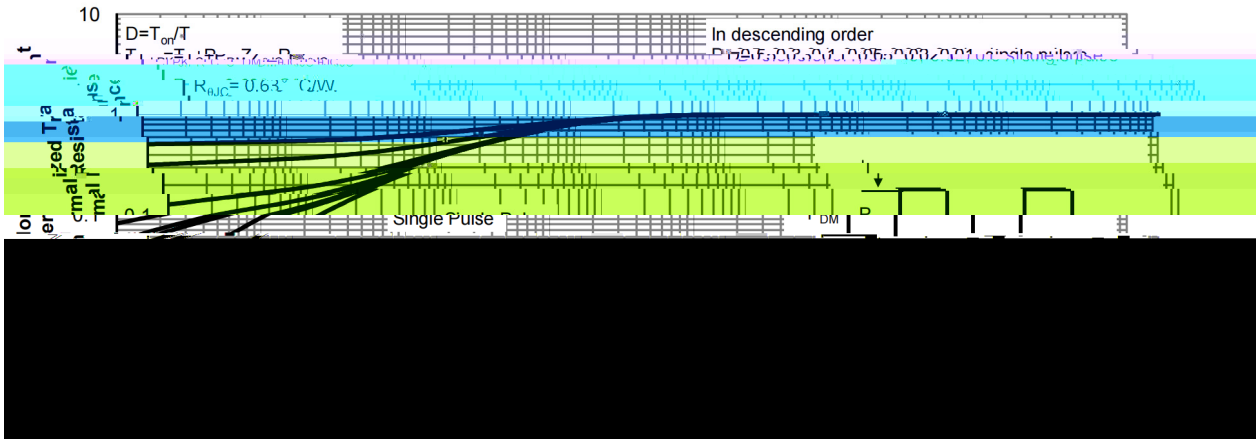



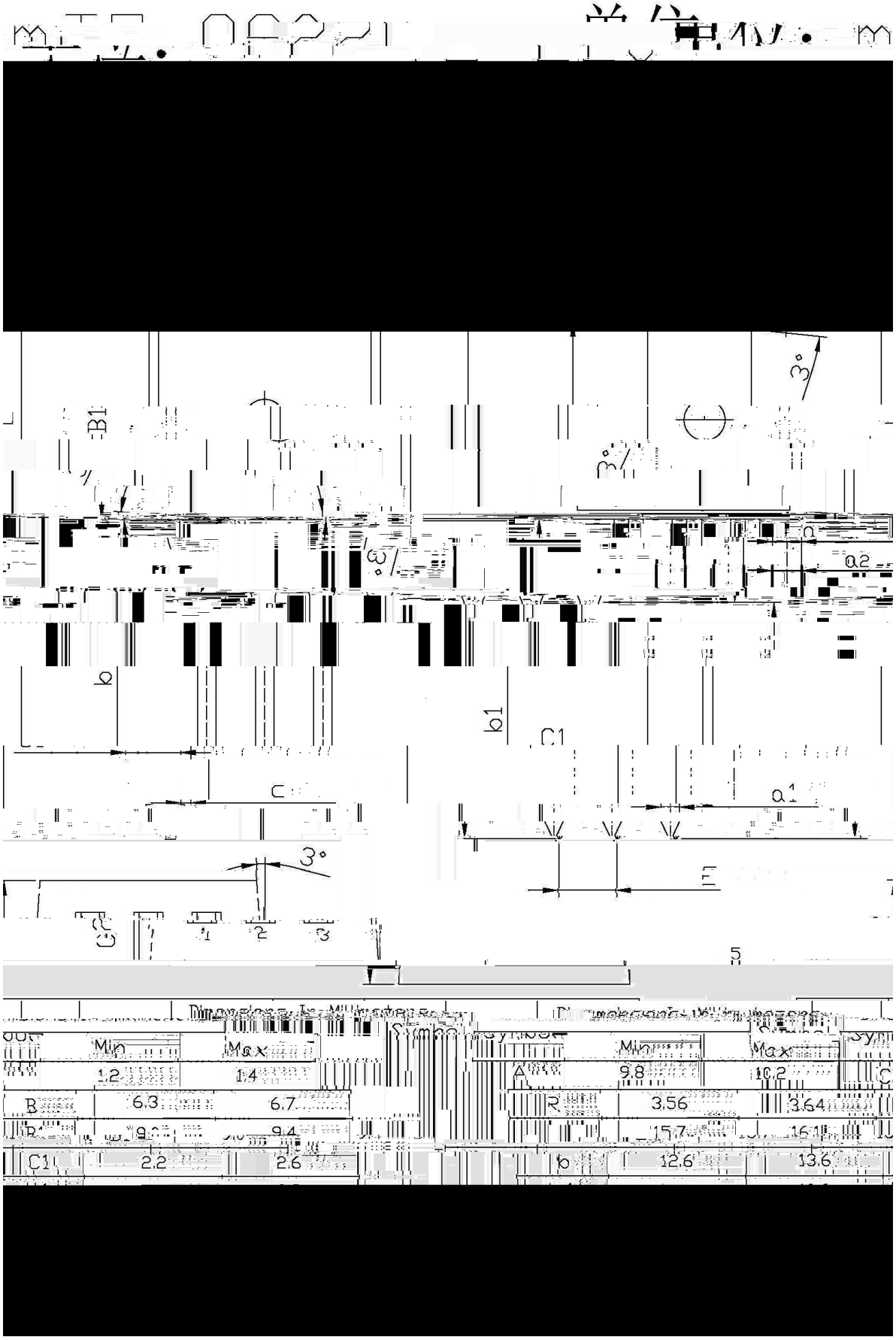

Figure 5: On-Resistance vs. Gate-Source Voltage

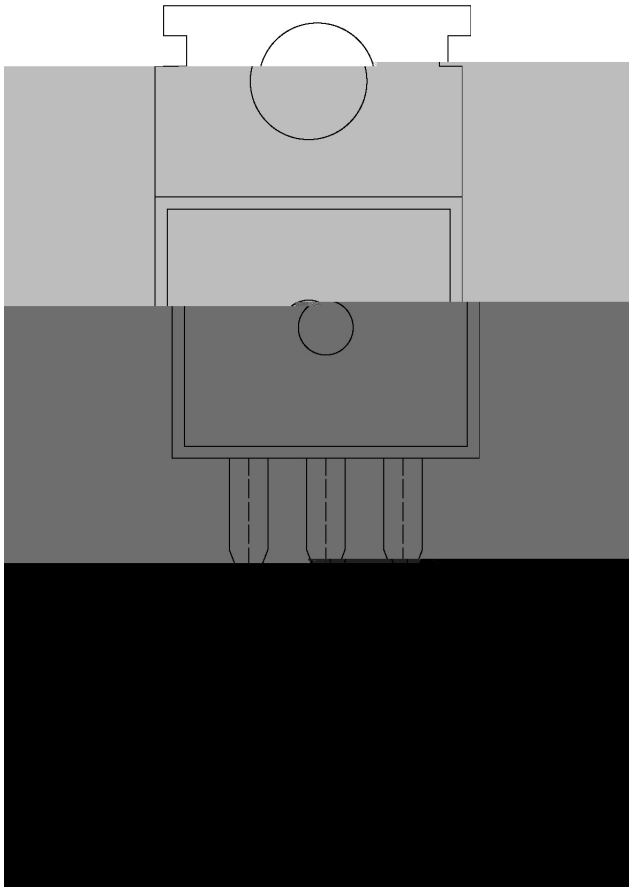
Figure 6: Body-Diode Characteristics


10
$V_{DS}$=30V
$I_D$=20A
8
9000
7500
6000
6


1000.0
10μs
100.0


10
D=$T_{on}$/T
In descending order
Single Pulse


B1
3°
3°
3°
a
a2
b
b1
C1
c
a1
3°
C2
1
2
3
5
Min
Max
Min
Max
1.2
1.4
9.8
10.2
B
6.3
6.7
R
3.56
3.64
15.7
16.1
C1
2.2
2.6
b
12.6
13.6



EU 版 И

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Note:

BR: Company Code

| |
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| |
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Note:

1 25 150 60 90sec;

2 255±5 5±0.5sec;

3 2 10

1.Preheating:25~150 , Time:60~90sec.

2.Peak Temp.:255±5 , Duration:5±0.5sec.