

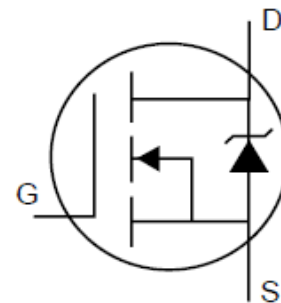
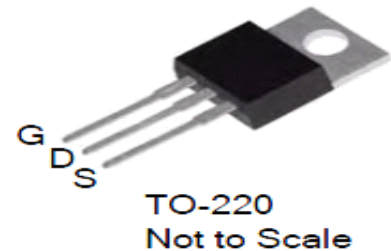
N-Channel MOSFETS

DESCRIPTION

The OGFD 80N08TR is the N-Channel logic enhancement mode Power field effect transistors are produced using high cell density. Dmos trench technology. This high density process is especially tailored to minimize on-state resistance.

These devices are particularly suited for low voltage application such as cellular phone and notebook computer power management and other battery powered circuits where high-side switching and low in-line power loss are needed in a very small outline surface mount package.

V_{DSS}	$R_{DS(ON)}$	I_D
80V	8m Ω	80A



Applications:

- Application Systems
- Inverter systems
- DC Motor Control
- Improved dv/dt capability, high ruggedness

Ordering Information		
PART NUMBER	PACKAGE	BRAND
80N08TR	TO-220	OGFD

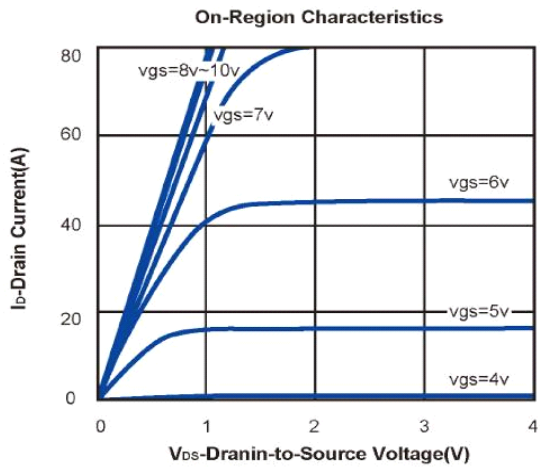
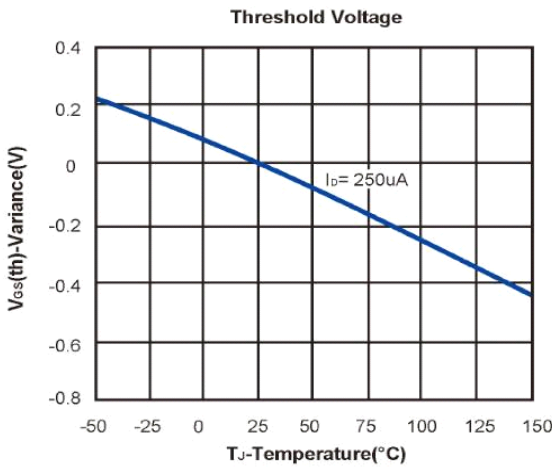
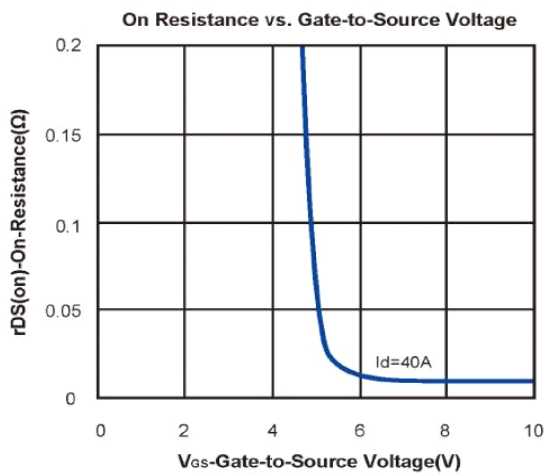
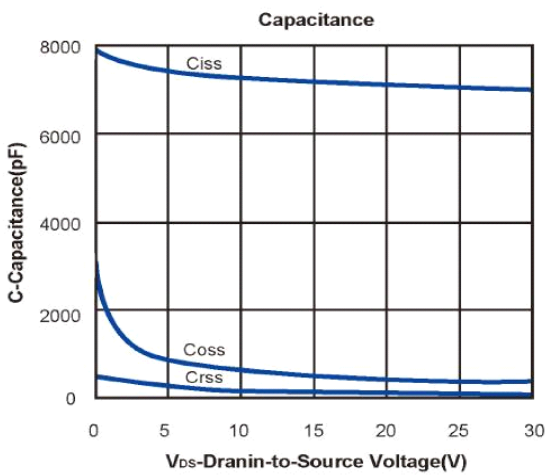
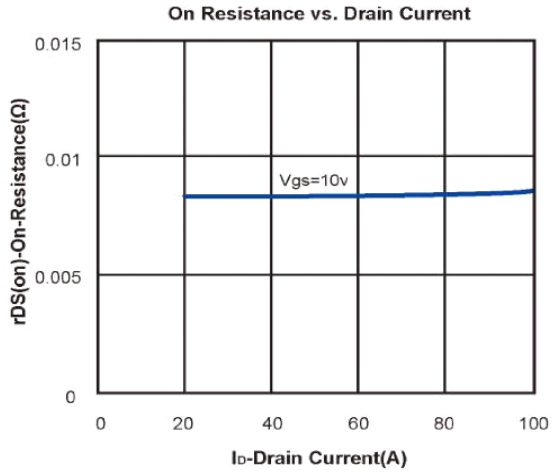
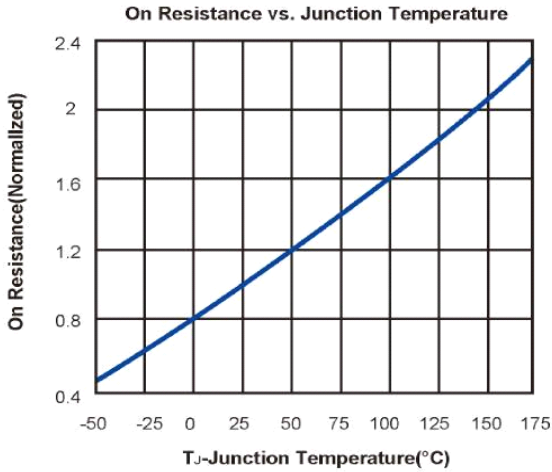
Absolute Maximum Ratings (TC=25°C, unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DSS}	80	V
Gate-Source Voltage	V_{GSS}	±25	V

Symbol	Parameter	Value	Unit
I_D	Continuous Drain Current	80	A
I_{DM}	Pulsed Drain Current @ $V_G=10V$	330	A
P_D	Power Dissipation	230	W
	Derating Factor above 25°C	1.1	W/°C
E_{AS}	Single Pulse Avalanche Energy (L=1mH, =40A)	840	mJ
T_J and T_{STG} Range	Operating Junction and Storage Temperature Range	-55 to 175	°C

Electrical Characteristics (Tj=25, unless otherwise specified)

Symbol	parameter	Limit	Min	Typ	Max	Unit
STATIC						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0, I_D=250\mu A$	80			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	2		4	V
I_{GSS}	Gate Body Leakage	$V_{DS}=0V, V_{GS}=\pm 25V$			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=80V, V_{GS}=0V$			1	uA
$R_{DS(ON)}$	Drain-Source	$V_{GS}=10V, I_D=40A$		8	10.5	mΩ
V_{SD}	Diode Forward Voltage	$I_{SD}=40A, V_{GS}=0V$		0.9	1.2	V
DYNAMIC						
Q_g	Total Gate Charge	$V_{DD}=65V, V_{GS}=10V, I_D=80A$		125		nC
Q_g	Total Gate Charge	$V_{DD}=65V, V_{GS}=4.5V, I_D=80A$		31.3		
Q_{gs}	Gate-Source Charge			32.9		
Q_{gd}	Gate-Drain Charge			28.1		
C_{iss}	Input capacitance	$V_{DS}=20V, V_{GS}=0V, f=1MHz$		6830		pF
C_{oss}	Output Capacitance			415		
C_{rss}	Reverse Transfer Capacitance			154		
R_g	Gate Resistance	$V_{DS}=0V, V_{GS}=0V, f=1MHz$		1.06		Ω
$T_d(on)$	Turn-on Delay Time	$V_{DD}=30V, R_G=10\Omega, V_{GS}=10V, R_L=15\Omega$		58.5		ns
T_r	Turn-on Rise Time			29.3		
$T_d(off)$	Turn-Off Delay Time			160		
T_f	Turn-Off Fall Time			39.9		



Typical Characteristics (T_J =25°C Noted)

