

N-Channel Power MOSFET (100V/80A)

Purpose

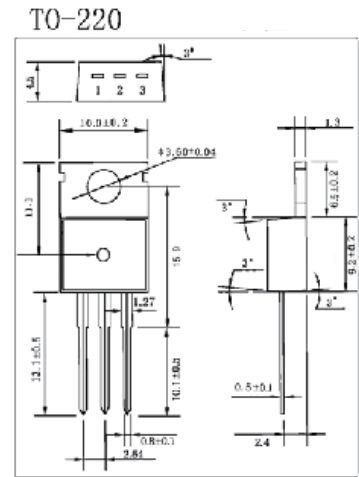
Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products

Feature

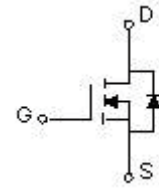
Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching.

Absolute maximum ratings (Ta=25°C)

Symbol	Rating	Unit
V_{DSS}	100	V
$I_D(T_c=25^\circ C)$	80	A
$I_D(T_c=100^\circ C)$	60	A
I_{DM}	300	A
V_{GSS}	± 20	V
E_{AS}	450	mJ
I_{AR}	100	A
$P_D(T_c=25^\circ C)$	131	W
T_J, T_{STG}	-55 to 150	°C



1. Gate 2. Drain 3. Source



Electrical Characteristics (Ta=25°C)

Symbol	Test Conditions			Min	Typ	Max	Unit
BV_{DSS}	$V_{GS}=0V$		$I_D=250\mu A$	100			V
I_{DSS}	$V_{DS}=100V$		$V_{GS}=0V$			1	μA
	$V_{DS}=80V$		$T_c=125^\circ C$			10	μA
I_{GSS}	$V_{GS}=\pm 20V$		$V_{DS}=0V$			± 0.1	μA
$V_{GS(th)}$	$V_{DS}=V_{GS}$		$I_D=250\mu A$	2		4	V
$R_{DS(on)}$	$V_{GS}=10V$		$I_D=40A$		12	15	m Ω
g_{FS}	$V_{DS}=15V$		$I_D=20A$		45		S
V_{SD}	$V_{GS}=0V$		$I_S=80A$			1.4	V
C_{iss}					3660		pF
C_{oss}	$V_{DS}=40V$	$V_{GS}=0V$	$f=1MHz$		250		pF
C_{rss}					125		pF
$t_{d(on)}$					21		ns
t_r	$V_{DD}=50V$	$I_D=60A$	$R_G=1\Omega$		10		ns
$t_{d(off)}$					74		ns
t_f					16		ns



Typical Electrical and Thermal Characteristics (Curves)

