

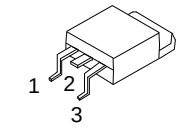
4N65

TO-251/252

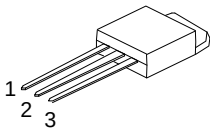
MOSFET(N-Channel)

FEATURES

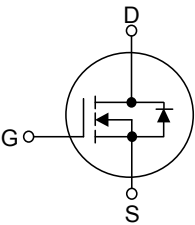
- Robust High Voltage Termination
- Avalanche Energy Specified
- Source-to-Drain Diode Recovery Time Comparable to a Discrete Fast Recovery Diode
- Diode is Characterized for Use in Bridge Circuits



TO-252



TO-251



- 1. Gate
- 2. Drain
- 3. Source

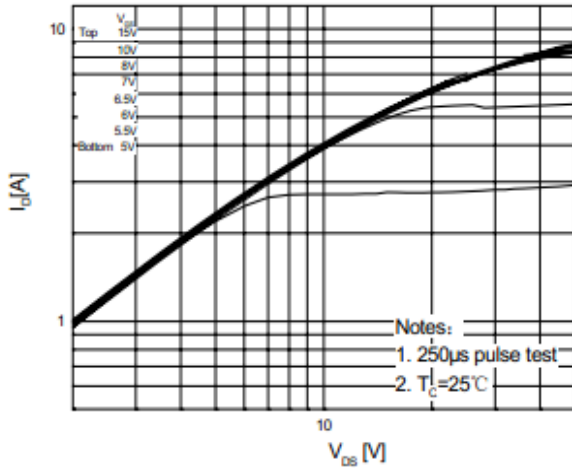
MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{DS}	Drain-Source voltage	650	V
V _{GS}	Gate-Source voltage	± 30	V
I _D	Drain current-Continuous	4	A
P _D	Maximum Power Dissipation	2	W
E _{AS}	Single pulse avalanche energy	200	mJ
T _J ,T _{stg}	Operating Junction and Storage Temperature Range	-55-150	°C

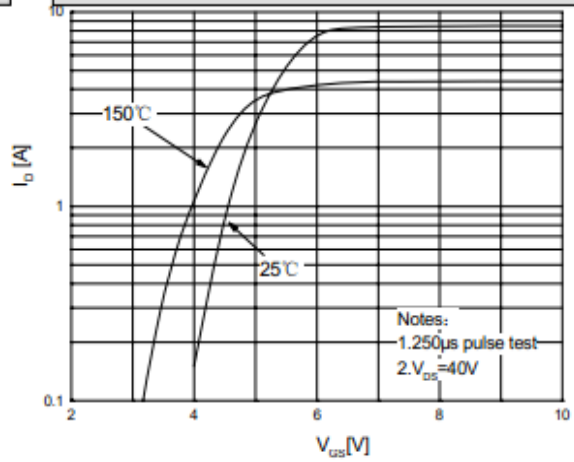
ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250uA	650			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =650V, V _{GS} =0V			10	uA
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =± 30V			± 100	nA
Gate-Threshold Voltage	V _{th(GS)}	V _{DS} = V _{GS} , I _D =250 uA	2		4	V
Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =2A			2.8	Ω
Diode Forward Voltage(Note3)	V _{SD}	V _{GS} =0V, I _D =4A			1.5	V
Input Capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1MHz		710	920	pF
Output Capacitance	C _{oss}			65	858	
Reverse Transfer Capacitance	C _{rss}			14	19	

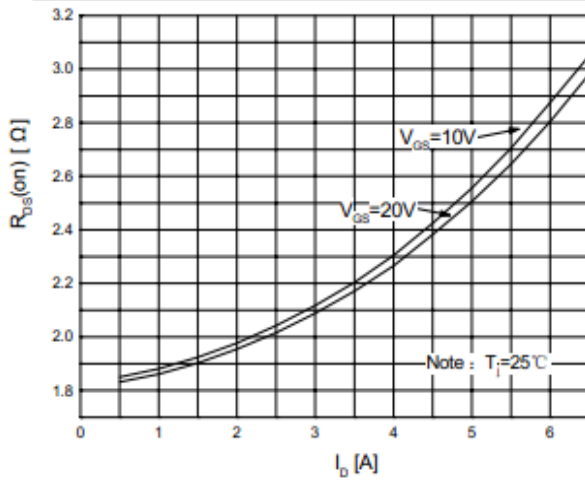
On-Region Characteristics



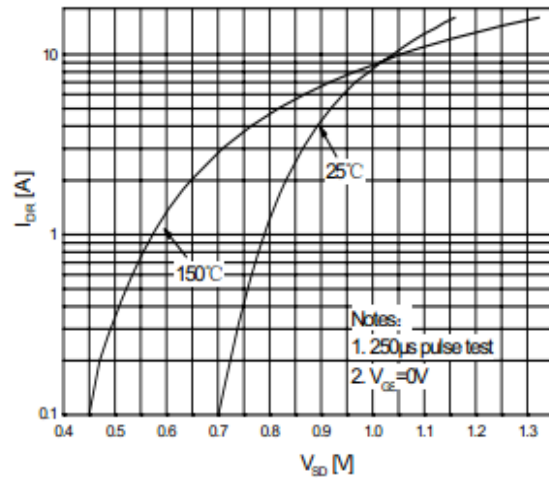
Transfer Characteristics



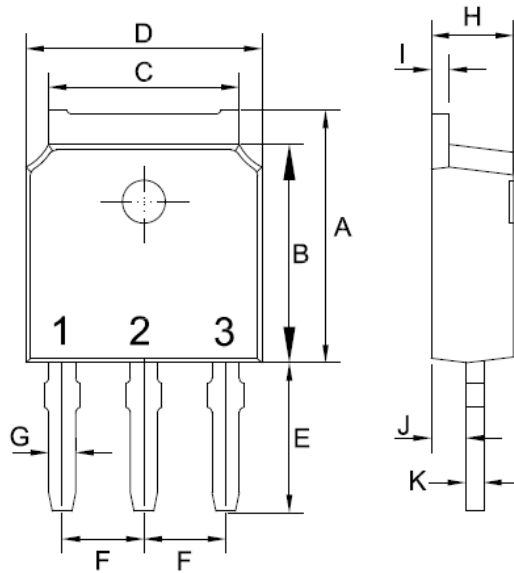
On-Resistance Variation vs. Drain Current and Gate Voltage



Body Diode Forward Voltage Variation vs. Source Current and Temperature

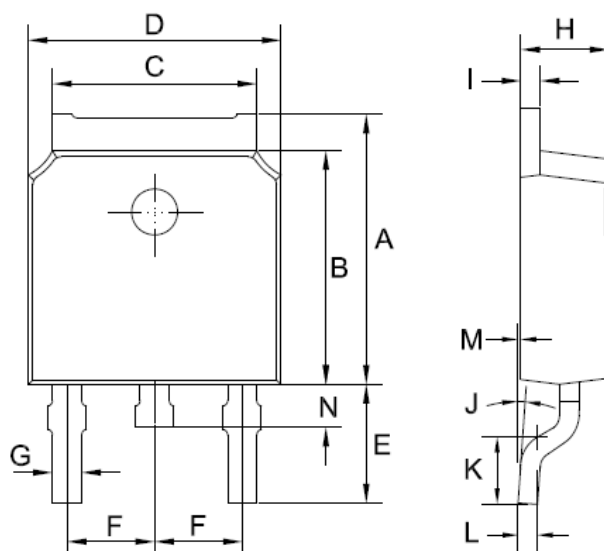


TO-251 Mechanical Drawing



TO-251 (IPAK)		
Unit:mm		
DIM	MIN	MAX
A	6.85	7.25
B	5.90	6.30
C	5.13	5.53
D	6.40	6.80
E	3.95	4.35
F	2.19	2.39
G	0.45	0.85
H	2.20	2.40
I	0.41	0.61
J	0.71	1.31
K	0.41	0.61

TO-252 Mechanical Drawing



TO-252 (DPAK)		
Unit:mm		
DIM	MIN	MAX
A	6.85	7.25
B	5.90	6.30
C	5.13	5.53
D	6.40	6.80
E	2.90	3.30
F	2.19	2.39
G	0.45	0.85
H	2.20	2.40
I	0.41	0.61
J	0°	8°
K	1.45	1.85
L	0.41	0.61
M	0.00	0.12
N	0.60	1.00