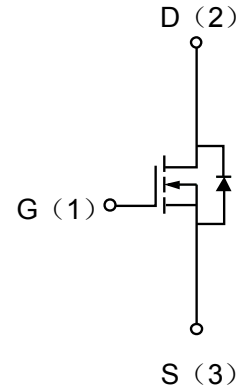


Description

The enhancement mode MOS is extremely high density cell and low on-resistance.

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$I_D(A)$
600	1.9@ $V_{GS}=10V$	4


Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	600		-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V, V_{GS}=0V$	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 30V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=0.65A$	-	1.9	2.2	Ω
Forward Trans conductance	g_{FS}	$V_{DS}=40V, I_D=2A$		7.4		S
Diode Forward Voltage	V_{SD}	$I_S=1A, V_{GS}=0V$		0.77	1	V
Maximum Body-Diode Continuous Current	I_S				4	A
Maximum Body-Diode Pulse Current	I_{SM}				16	A
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{GS}=0V, V_{DS}=25V,$ $f=1MHz$	400	511	615	pF
Output Capacitance	C_{OSS}		40	51	65	pF
Reverse Transfer Capacitance	C_{RSS}		3.5	4.4	5.3	pF
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=300V, V_{GS}=10V,$ $R_G=25\Omega,$ $I_D=4A$	-	20.2		ns
Turn-Off Delay Time	$t_{d(off)}$		-	36		ns
Turn-On Rise Time	t_r			28.7		ns
Turn-Off Fall Time	t_f			27		ns

Absolute maximum rating@25°C

Rating		Symbol	Value	Units
Drain-Source Voltage		V_{DS}	600	V
Gate-Source Voltage		V_{GS}	± 30	V
Drain Current	Continuous	I_D	4.0	A
	Pulsed	I_D	16.0	A
Total Power Dissipation	$T_A=25^\circ\text{C}$	P_D	104	W
	Derate above 25°C	P_D	0.83	W / °C

Typical Characteristics

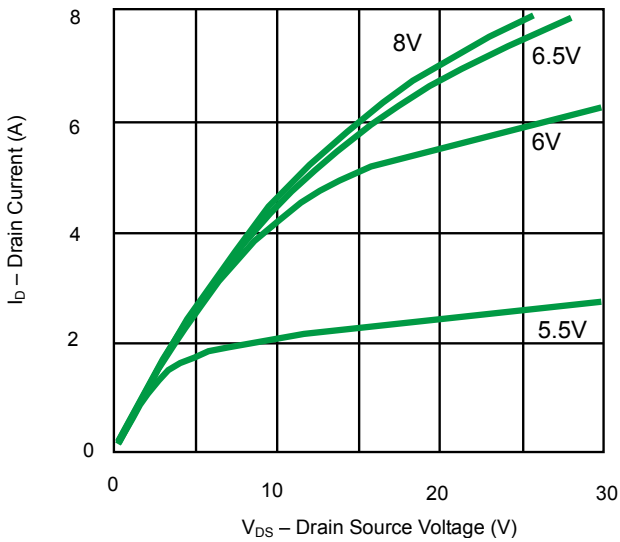


Fig 1. On-Region Characteristics

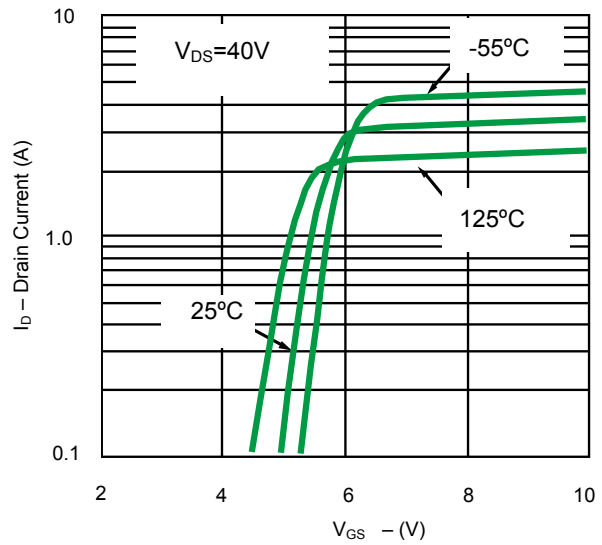


Fig 2. Transfer Characteristics

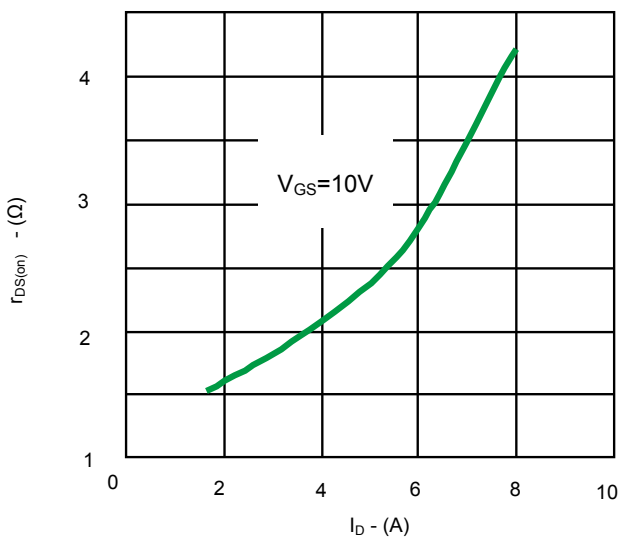


Fig 3. On-Resistance vs. Drain Current and Gate Voltage

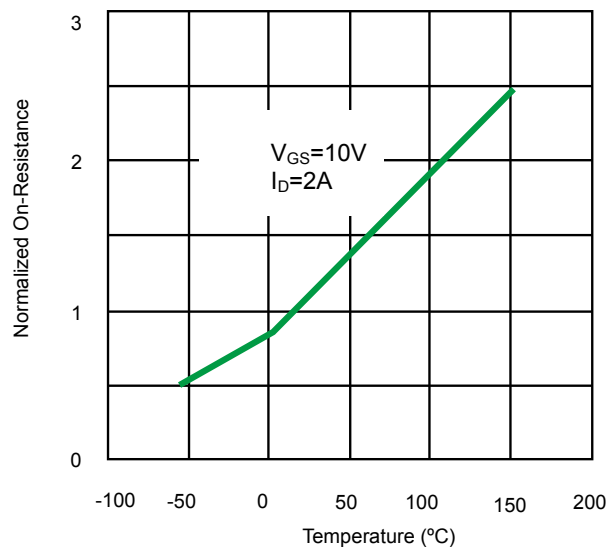
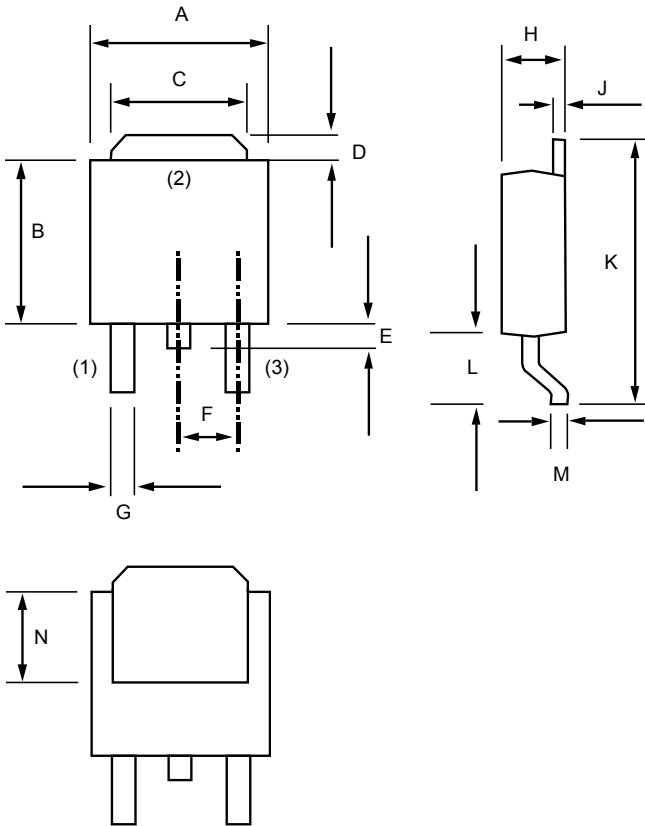


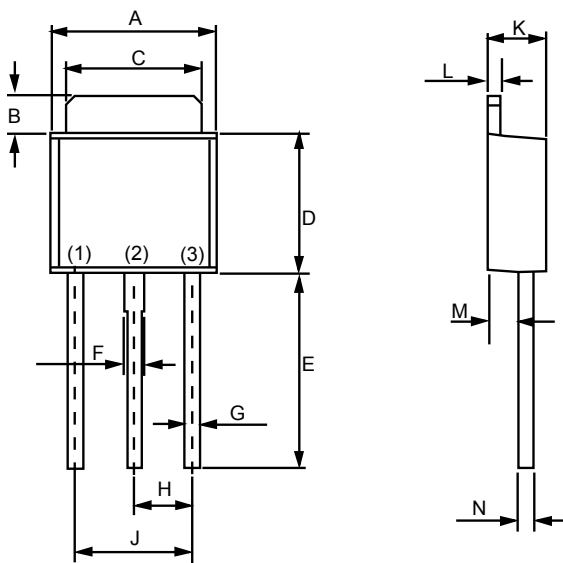
Fig 4. On-Resistance vs. Junction Temperature

Product dimension(PNMDP600V4) (TO-252)




Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	6.350	6.650	0.250	0.262
B	5.400	5.700	0.213	0.224
C	5.200	5.400	0.205	0.213
D	1.350	1.650	0.053	0.065
E	-	1.01	-	0.040
F	2.300TYP		0.091TYP	
G	0.500	0.700	0.020	0.028
H	2.200	2.400	0.087	0.094
J	0.430	0.580	0.017	0.023
K	9.500	9.900	0.374	0.390
L	2.550	2.900	0.100	0.114
M	0.430	0.580	0.017	0.023
N	3.80REF		0.150REF	

Product dimension(PNMIP600V4) (TO-251)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	6.350	6.650	0.250	0.262
B	1.350	1.650	0.053	0.065
C	5.200	5.400	0.205	0.213
D	5.400	5.700	0.213	0.224
E	7.500	7.900	0.295	0.311
F	0.700	0.900	0.028	0.035
G	0.500	0.700	0.020	0.028
H	2.300 TYP		0.091 TYP	
J	4.500	4.700	0.177	0.185
K	2.200	2.400	0.087	0.094
L	0.430	0.580	0.017	0.023
M	1.020	1.270	0.040	0.050
N	0.430	0.580	0.017	0.023


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