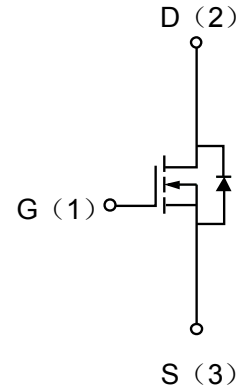


Description

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

MOSFET Product Summary		
V _{DS} (V)	R _{DS(on)} (Ω)	I _D (A)
600	7.5@ V _{GS} =10V	1.3


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 =250μA, 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} =±30V	-	-	±100	nA	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	2		4	V	
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =0.95A	-	7.5	9	Ω	
Forward Tran conductance	g _{FS}	V _{DS} =0V, I _D =0.65A		0.9		S	
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V		0.65	1	V	
Maximum Body-Diode Continuous Current	I _S				1	A	
Maximum Body-Diode Pulse Current	I _{SM}				4	A	
DYNAMIC PARAMETERS							
Input Capacitance	C _{ISS}	V _{GS} =0V, V _{DS} =25V, f =1MHz	105	130	160	pF	
Output Capacitance	C _{OSS}		12	14.5	17.5	pF	
Reverse Transfer Capacitance	C _{RSS}		1.5	1.8	2.2	pF	
SWITCHING PARAMETERS							
Turn-On Delay Time	t _{d(on)}	V _{DS} =300V, V _{GS} =10V, R _G =25Ω, I _D =1A	-	10	13	ns	
Turn-Off Delay Time	t _{d(off)}		-	20	26	ns	
Turn-On Rise Time	t _r				6.7	13	ns
Turn-Off Fall Time	t _f				11.5	23	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	1.3	A
	Pulsed	I_D	4.0	A
Total Power Dissipation	$T_A=25^\circ\text{C}$	P_D	44	W
	$T_A=70^\circ\text{C}$	P_D	30	W

Typical Characteristics

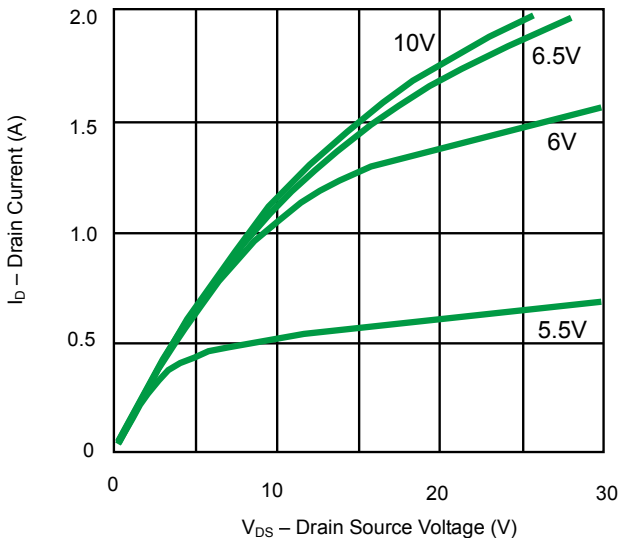


Fig 1. On-Region Characteristics

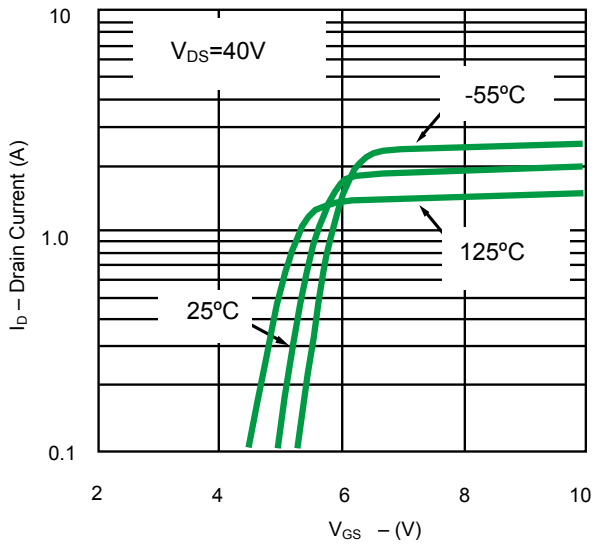


Fig 2. Transfer Characteristics

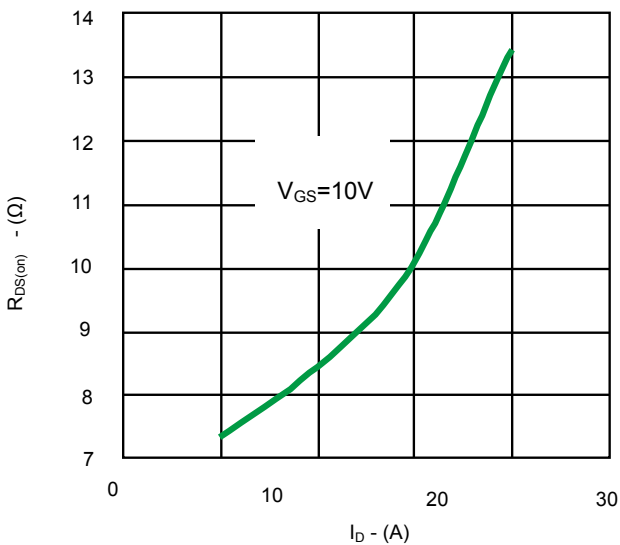


Fig 3. On-Resistance vs. Drain Current and Gate Voltage

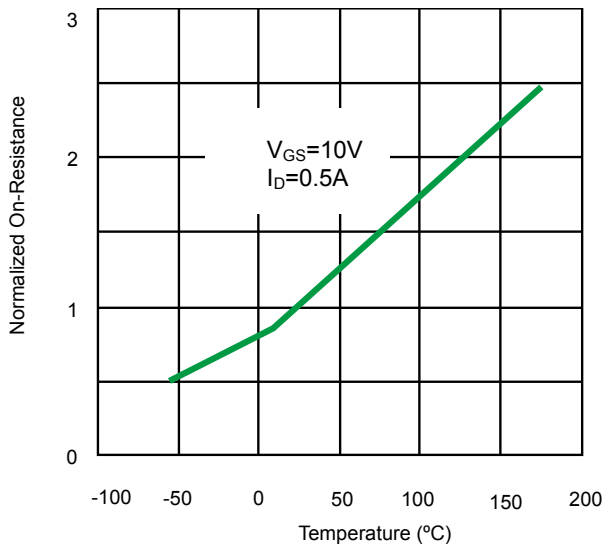
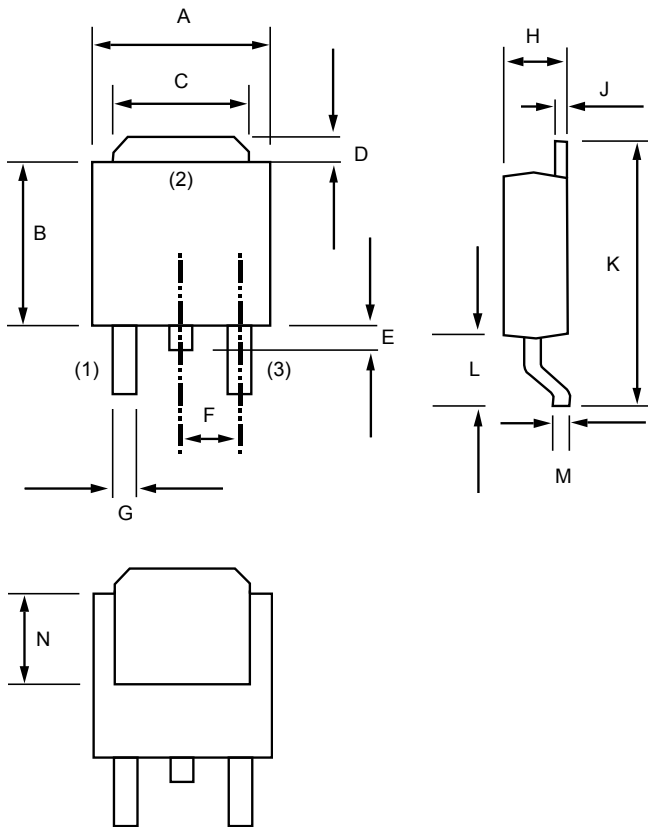


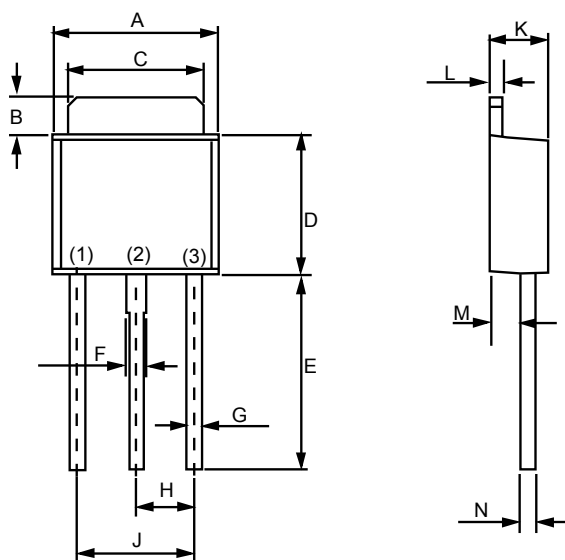
Fig 4. On-Resistance vs. Junction Temperature

Product dimension(PNMDP600V1) (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(PNMIP600V1) (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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