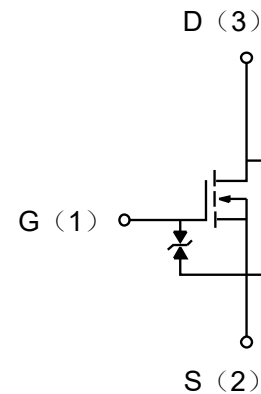


**Description**

PNMT60V02E is designed for high speed switching applications

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

MOSFET Product Summary			
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$V_{GS(th)}(V)$	$I_D(A)$
60	7.5@ $V_{GS}=10V$	0.5 to 1.5	0.18


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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D = 10\mu A, V_{GS} = 0V$	60	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 40V, V_{GS} = 0V$	-	-	0.5	$\mu A$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$	-	-	$\pm 10$	$\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5	-	1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 5V, I_D = 0.05A$	-	-	7.5	$\Omega$
		$V_{GS} = 10V, I_D = 0.1A$	-	-	7.5	$\Omega$
Diode Forward Voltage	$V_{SD}$		-	0.72	1	V
Maximum Body-Diode Continuous Current	$I_S$		-	-	0.2	A
<b>DYNAMIC PARAMETERS</b>						
Input Capacitance	$C_{ISS}$	$V_{GS} = 0V, V_{DS} = 25V,$ $f = 1MHz$	-	-	40	pF
Output Capacitance	$C_{DSS}$		-	-	20	pF
Reverse Transfer Capacitance	$C_{RSS}$		-	-	5	pF
Total Gate Charge	$Q_g$	$I_D = 0.2A, V_{DS} = 6V,$ $V_{GS} = 4.5V$	-	0.23	-	nC
Gate-to-Source Charge	$Q_{gs}$		-	0.05	-	
Gate-to-Drain(Miller) Charge	$Q_{gd}$		-	0.06	-	

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
<b>SWITCHING PARAMETERS</b>						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=30V, V_{GS}=10V,$ $R_G=25\Omega, R_L=150\Omega$ $I_D=0.2A$	-	-	20	ns
Turn-Off Delay Time	$t_{d(off)}$		-	-	20	ns
Reverse recovery time	$t_{rr}$	$I_F=0.2A, dI/dt=100A/\mu s$		11.3		nS
Reverse recovery charge	$Q_{rr}$			7.5		nC
Reverse recovery current	$I_{rrm}$			0.66		A

## Absolute maximum rating@25°C

Rating		Symbol	Value	Units
Drain-Source Voltage		$V_{DS}$	60	V
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Drain Current	Continuous	$I_D$	0.18	A
	Pulsed	$I_D$	0.36	A
Total Power Dissipation	$T_A=25^\circ C$	$P_D$	150	mW
Gate to Source ESD:HBM_C=100pF,R=1.5KΩ		$V_{ESD(G-S)}$	1000	V

Typical Characteristics

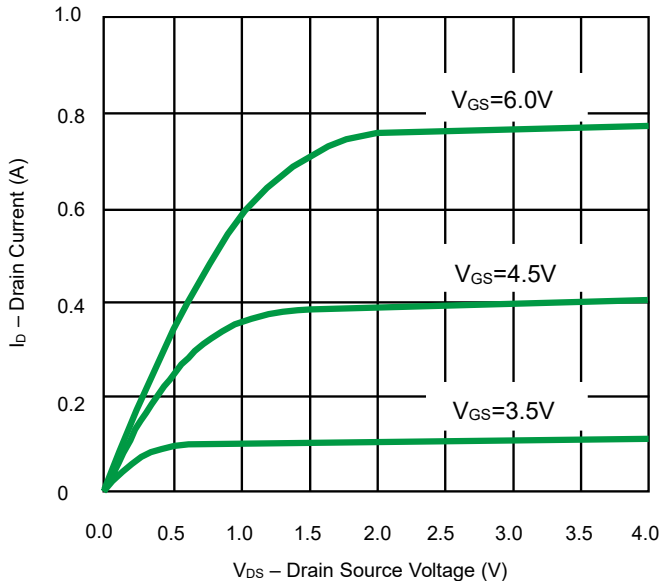


Fig 1. Output Characteristics

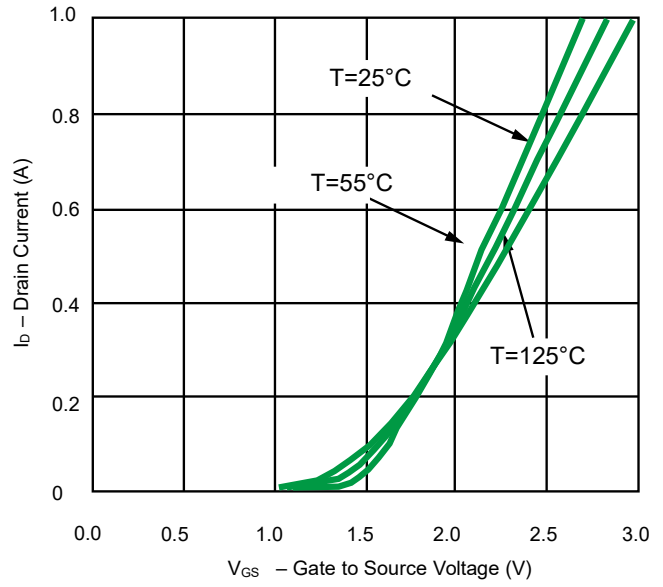


Fig 2. Transfer Characteristics

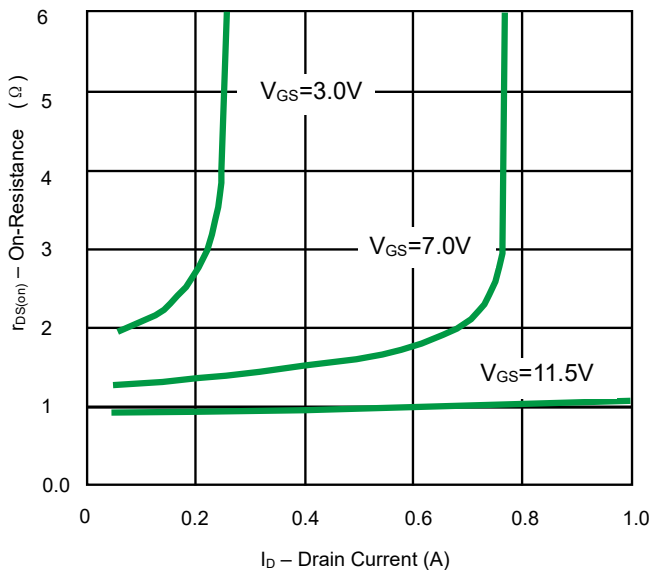


Fig 3. On-Resistance vs. Drain Current

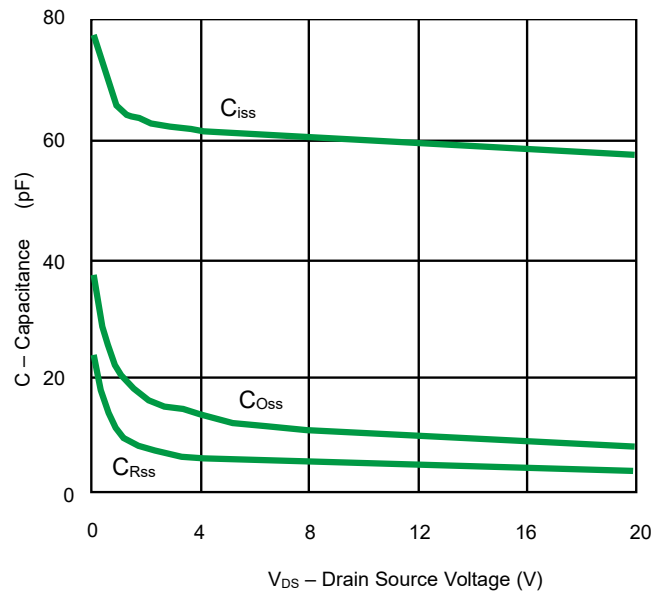
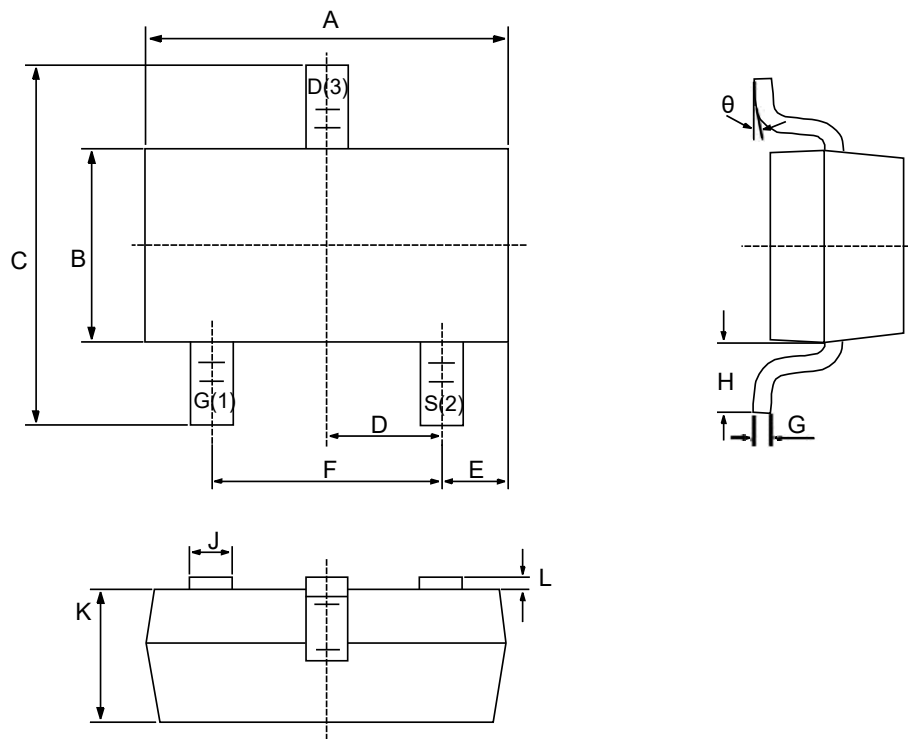



Fig 4. Capacitance

Product dimension(SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.80	3.00	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	2.10	2.50	0.0830	0.0984
D	0.89	1.02	0.0350	0.0401
E	0.45	0.60	0.0177	0.0236
F	1.78	2.04	0.0701	0.0807
G	0.085	0.177	0.0034	0.0070
H	0.45	0.60	0.0180	0.0236
J	0.37	0.50	0.0150	0.0200
K	0.89	1.11	0.0350	0.0440
L	0.013	0.100	0.0005	0.0040
θ	0°	10°	0°	10°


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