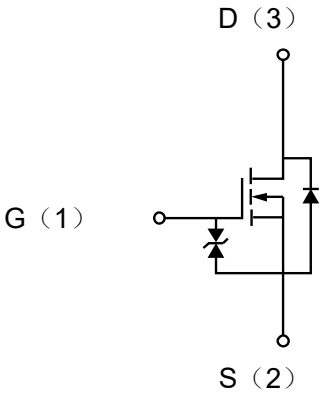
Description

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)	$R_{DS(on)}$(Ω)	$V_{GS(th)}$(V)	I_D(A)
60	7.5@ V_{GS}=10V	0.5 to 1.5	0.18



Electrical characteristics per line@25℃(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	V_{DSS}	I_D =10μA,V_{GS}=0V	60	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =40V,V_{GS}=0V	-	-	0.5	μA
Gate-Body Leakage Current	I_{GSS}	V_{DS} =0V,V_{GS}=±20V	-	-	±10	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.5	-	1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=5V, I_D =0.05A	-	-	7.5	Ω
		V_{GS}=10V, I_D =0.1A	-	-	7.5	Ω
Diode Forward Voltage	V_{SD}		-	0.72	1	V
Maximum Body-Diode Continuous Current	I_S		-	-	0.2	A
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{GS}=0V, V_{DS} =25V, f=1MHz	-	14.5	40	pF
Output Capacitance	C_{DSS}		-	5.0	20	pF
Reverse Transfer Capacitance	C_{RSS}		-	0.25	5	pF
Total Gate Charge	Qg	I_D =0.2A, V_{DS} =6V, V_{GS} =4.5V	-	0.23	-	nC
Gate-to-Source Charge	Qgs		-	0.05	-	
Gate-to-Drain(Miller) Charge	Qgd		-	0.06	-	

Electrical characteristics per line@25℃(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
SWITCHING PARAMETERS						
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=30V, V_{GS}=10V, R_G=25Ω, R_L=150Ω I_D=0.2A	-	-	20	ns
Turn-Off Delay Time	$t_{d(off)}$		-	-	20	ns
Reverse recovery time	trr	IF=0.2A, dI/dt=100A/μs		11.3		nS
Reverse recovery charge	Qrr			7.5		nC
Reverse recovery current	Irrm			0.66		A

Absolute maximum rating@25℃

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

Typical Characteristics

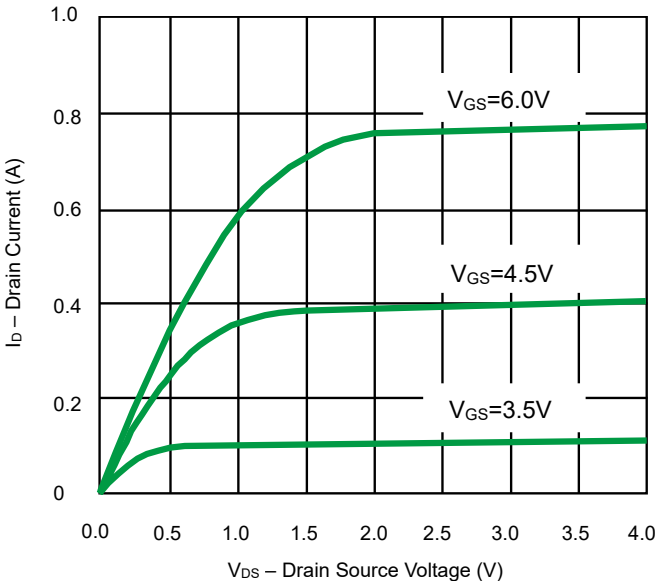


Fig 1. Output Characteristics

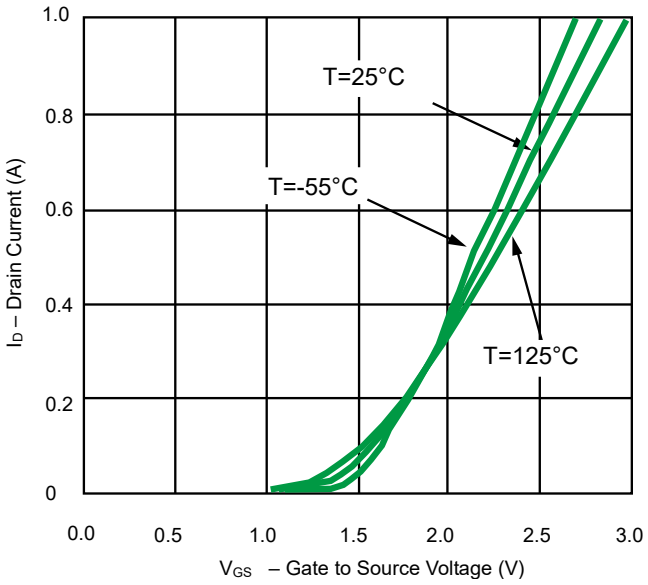


Fig 2. Transfer Characteristics

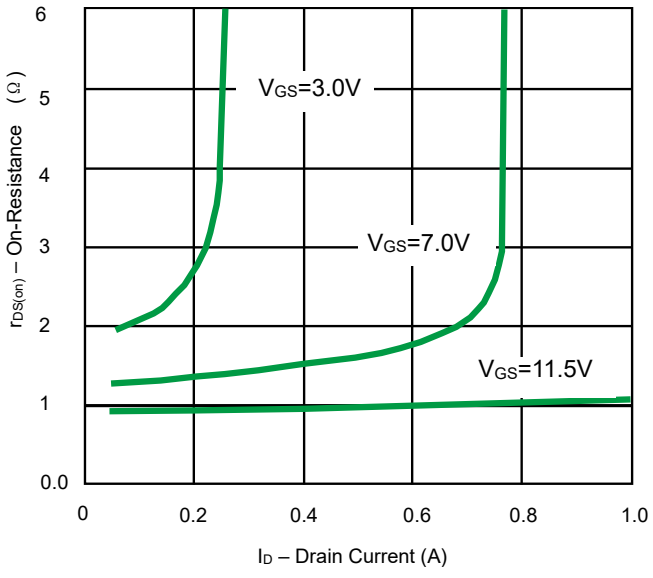


Fig 3. On-Resistance vs. Drain Current

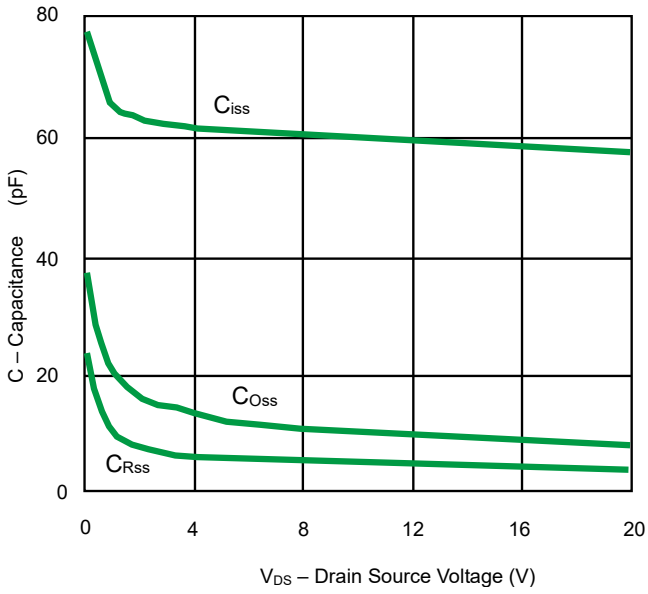
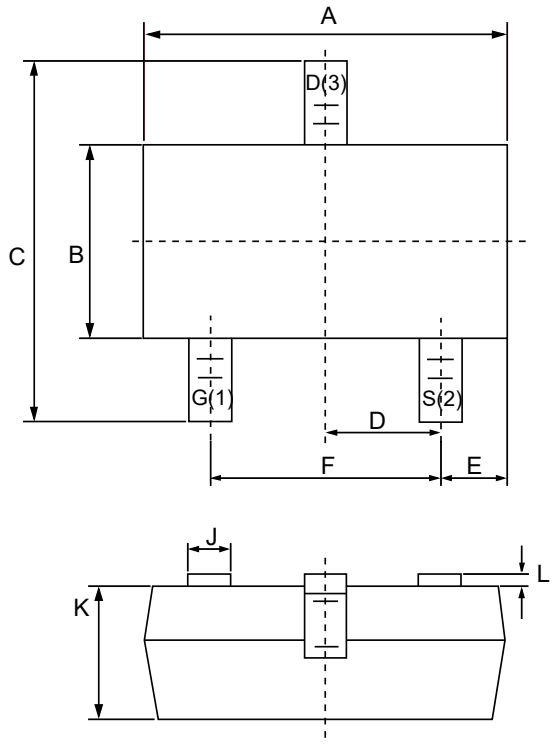


Fig 4. Capacitance

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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