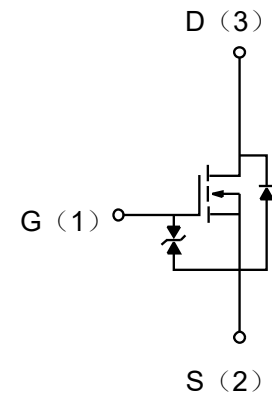


Description

PNM723T30V01 is designed for high speed switching applications

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

MOSFET Product Summary			
$V_{DS}(V)$	$R_{DS(on)}(\Omega)$	$V_{GS(th)}(V)$	$I_D(A)$
30	7@ $V_{GS}=2.5V, I_D=10mA$	0.5 to 1.5	0.1


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

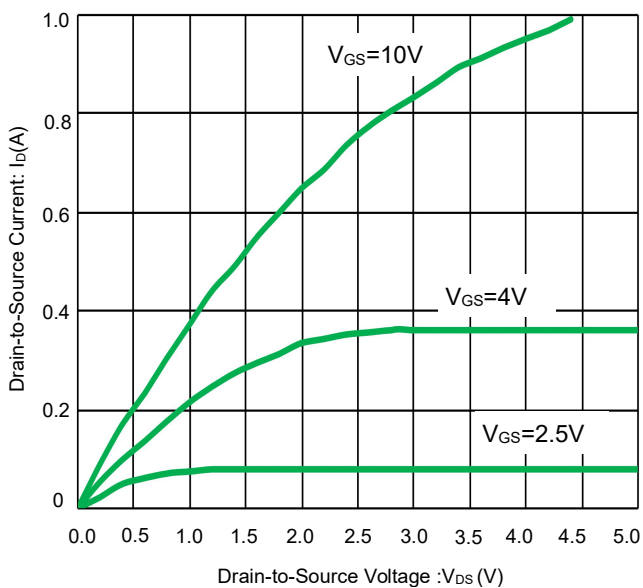
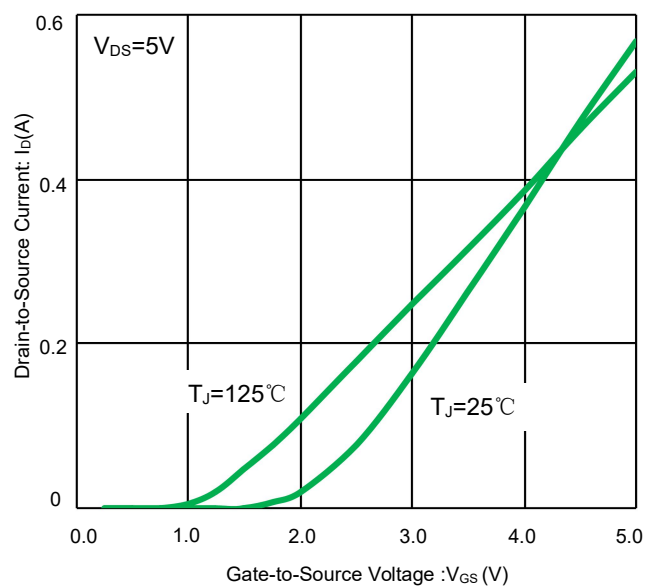
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=10\mu A, V_{GS}=0V$	30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$	-	-	± 1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.5	-	1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=2.5V, I_D=1mA$		6.5	9	Ω
		$V_{GS}=2.5V, I_D=10mA$		7	9	Ω
		$V_{GS}=4V, I_D=10mA$	-	4	6	Ω
		$V_{GS}=10V, I_D=100mA$	-	3	5	Ω
Forward Transconductance	g_{FS}	$V_{DS}=5V, I_D=0.1A$	-	0.2	-	S
Source-Drain Diode Forward Voltage	VFSD (V)	$I_D=100mA, V_{GS}=0V$		0.75	1	V
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	$V_{GS}=0V, V_{DS}=25V,$ $f=1MHz$	-	-	40	pF
Output Capacitance	C_{OSS}		-	-	10	pF
Reverse Transfer Capacitance	C_{RSS}		-	-	5	pF

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
SWITCHING PARAMETERS						
Total Gate Charge	Qg	$V_{GS}=4.5V, V_{DS}=6V,$ $I_D=0.1A$			0.5	nC
Gate-Source Charge	Qgs				0.2	nC
Gate-Drain Charge	Qgd				0.2	nC
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=30V, V_{GS}=10V,$ $R_G=25\Omega, R_L=150\Omega, I_D=0.1A$	-	3		ns
Turn-On Rise Time	t_r		-	3.5		ns
Turn-Off Delay Time	$t_{d(off)}$		-	5		ns
Turn-On Fall Time	t_f		-	2.5		ns

Absolute maximum rating@25°C

Rating	Symbol	Value	Units	
Drain-Source Voltage	V_{DS}	30	V	
Gate-Source Voltage	V_{GS}	± 20	V	
Drain Current	Continuous	I_D	0.10	A
	Pulsed	I_D	0.36	A
Total Power Dissipation	$T_A=25^\circ C$	P_D	150	mW

Typical Characteristics

Fig 1. On-Region Characteristics

Fig 2. Transfer Characteristics

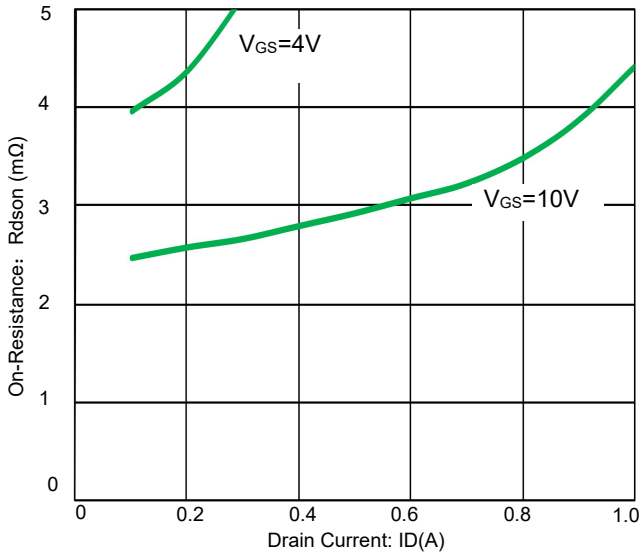


Fig 3. On-Resistance v.s. Drain Current and Gate Voltage

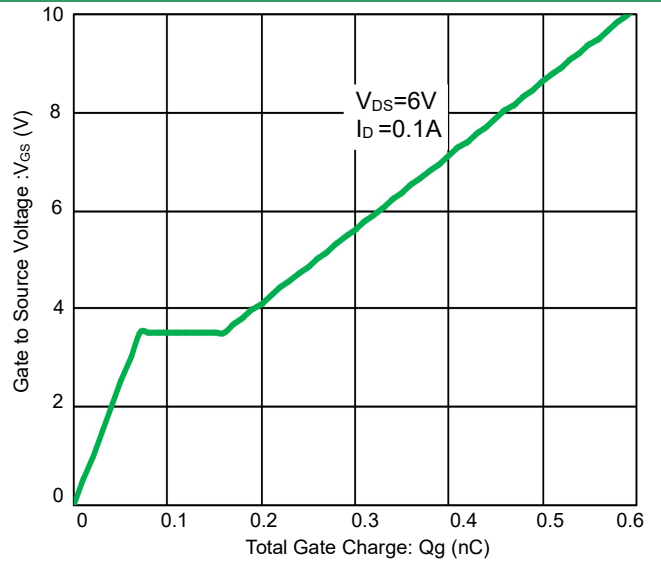


Fig 4. Gate Charge Characteristics

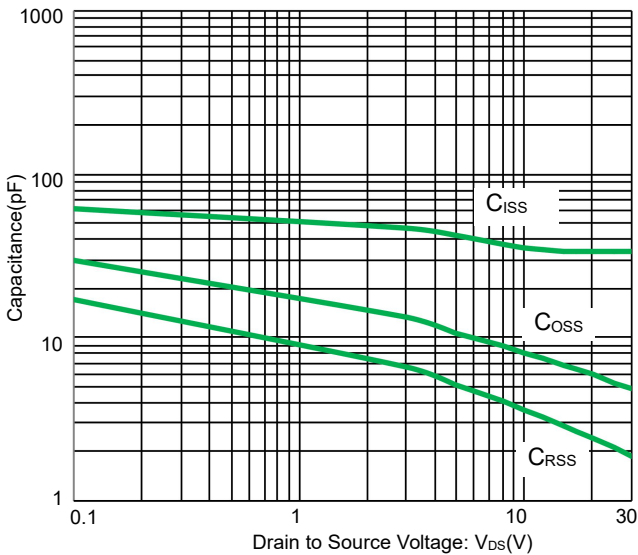


Fig 5. Capacitance Characteristic

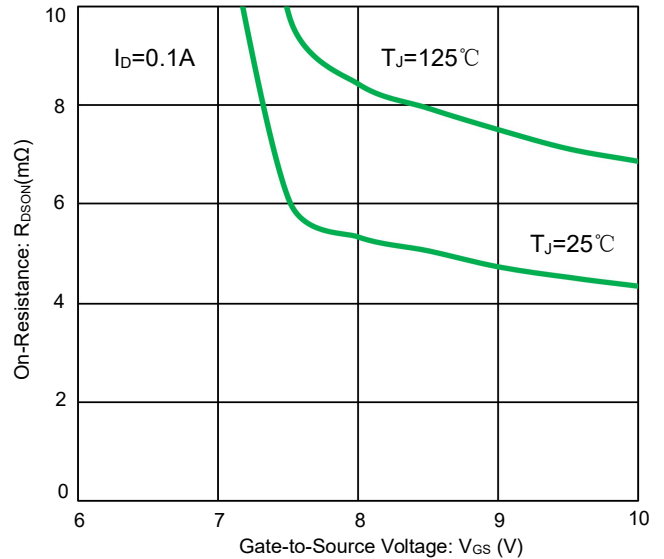


Fig 6. On-Resistance vs. Gate-to-Source Voltage

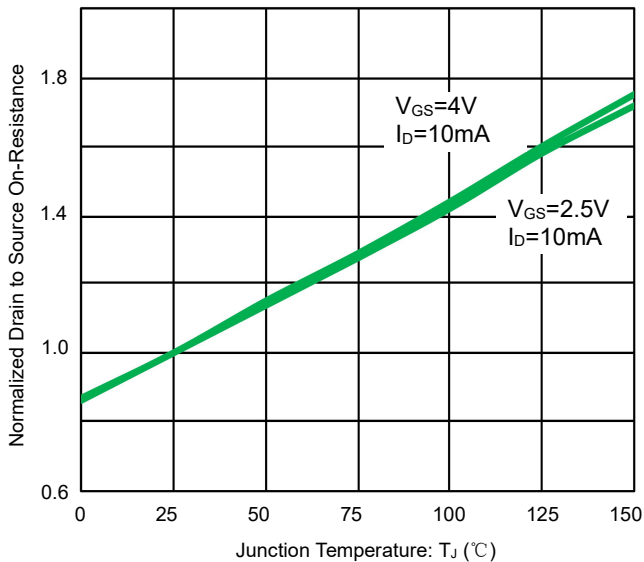


Fig 7. Normalized On-Resistance vs. Junction Temperature

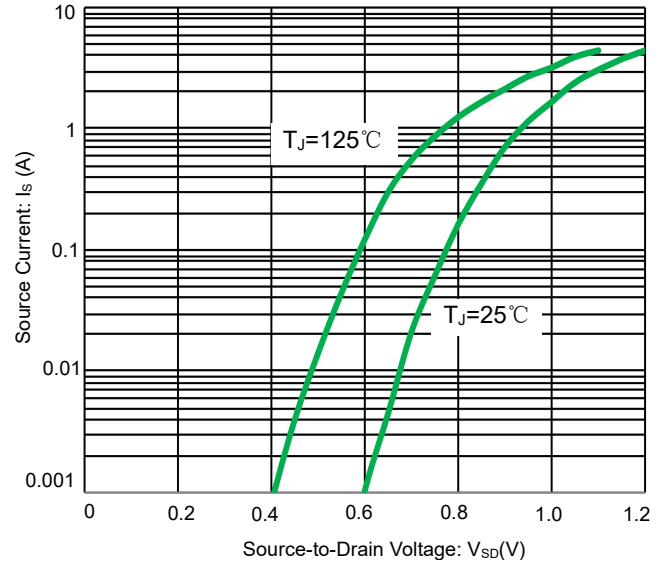
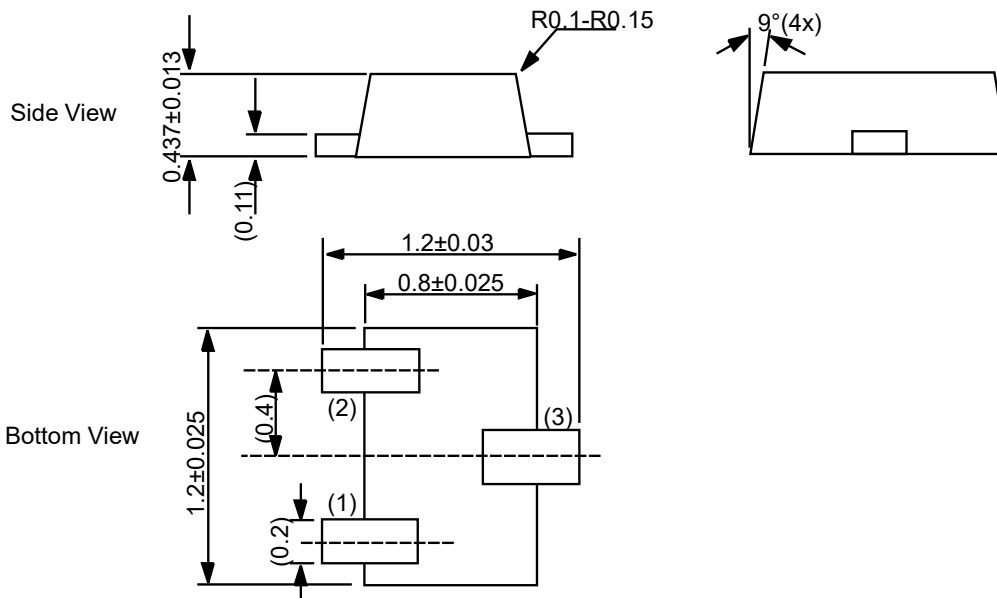
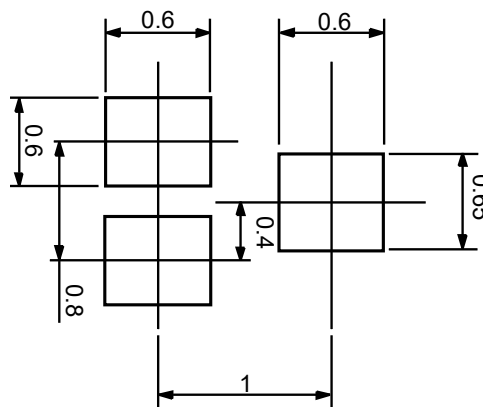


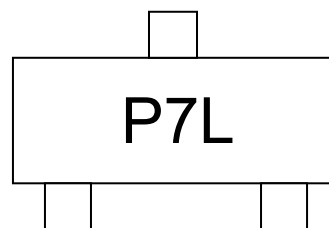
Fig 8. Body diode forward voltage

Product dimension (SOT-723)


Unit: mm



Suggested PCB Layout

Unit: mm

Marking information

Ordering information

Device	Package	Reel	Shipping
PNM723T30V01	SOT-723 (Pb-Free)	7"	10000 / Tape & Reel


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