Description

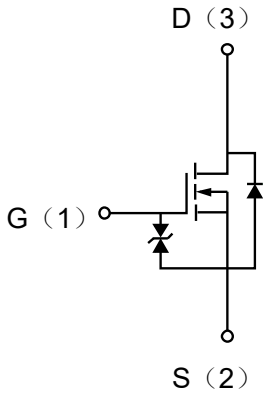
PNM723T30V01 is designed for high speed switching applications

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

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

Mechanical data

- Halogen Free



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	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}=±20V	-	-	±1	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}=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)	ID=100mA,VGS=0V		0.75	1	V
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{GS}=0V, V_{DS}=15V, f=1MHz	-	10	12	pF
Output Capacitance	C_{OSS}		-	8.3	10	pF
Reverse Transfer Capacitance	C_{RSS}		-	3.3	4.5	pF

Electrical characteristics per line@25℃(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=25Ω, RL=150Ω,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℃

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℃	P_D	150	mW

Typical Characteristics

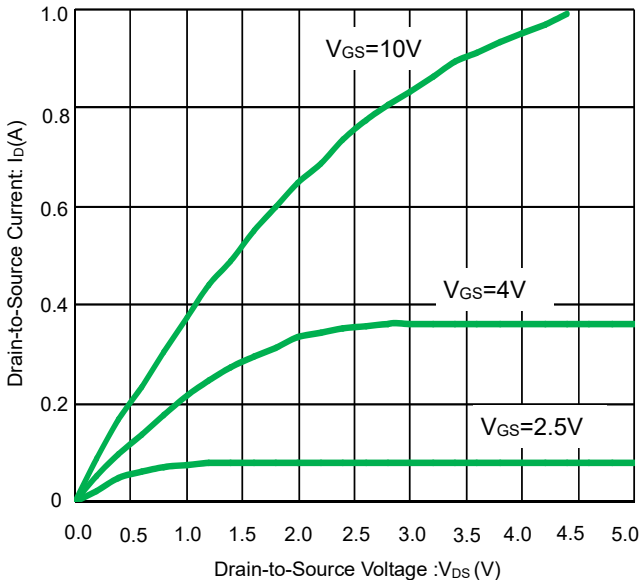


Fig 1. On-Region Characteristics

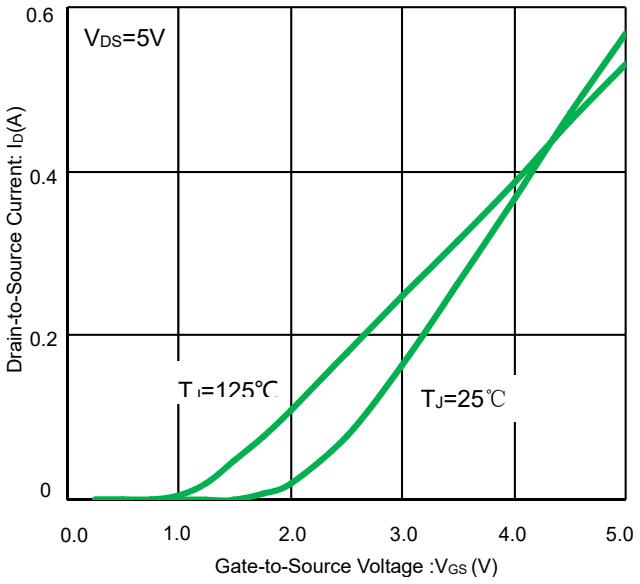


Fig 2. Transfer Characteristics

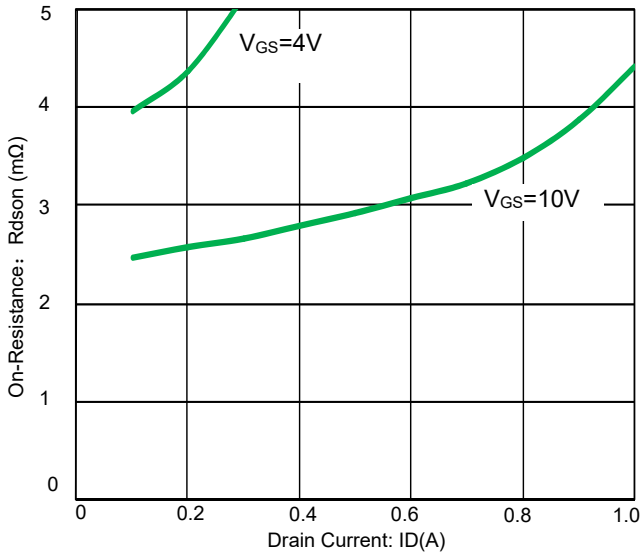


Fig 3. On-Resistance v.s. Drain Current and Gate Voltage

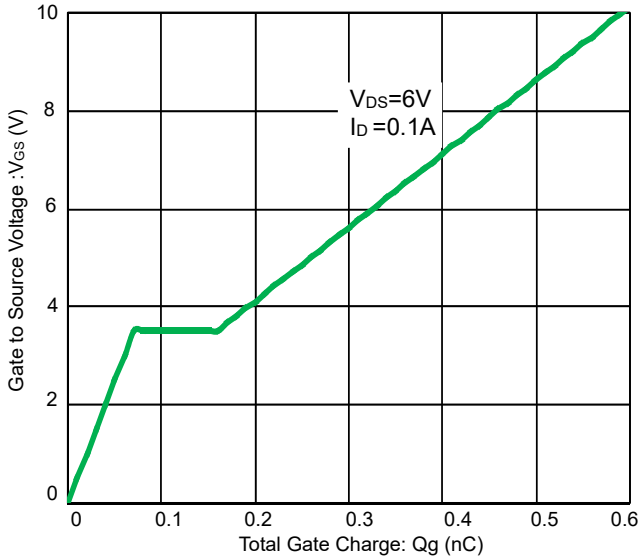


Fig 4. Gate Charge Characteristics

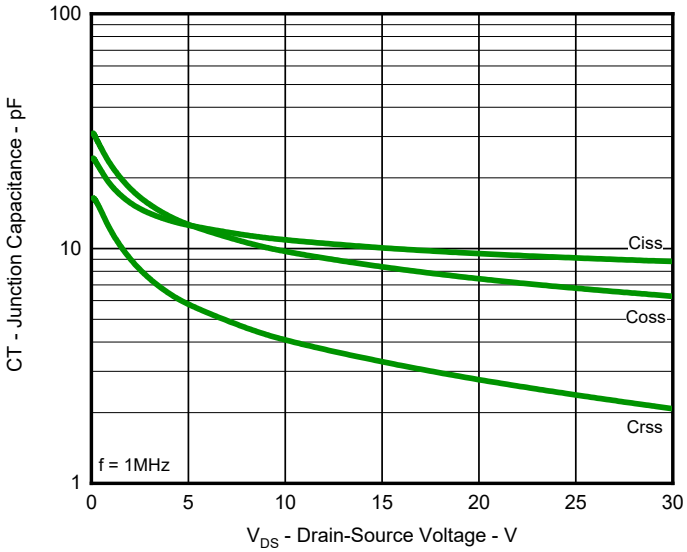


Fig 5. Capacitance Characteristic

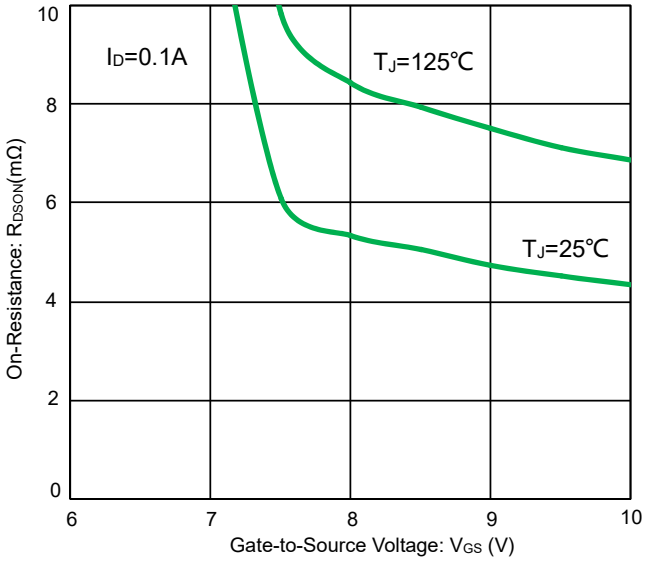


Fig 6. On-Resistance vs. Gate-to-Source Voltage

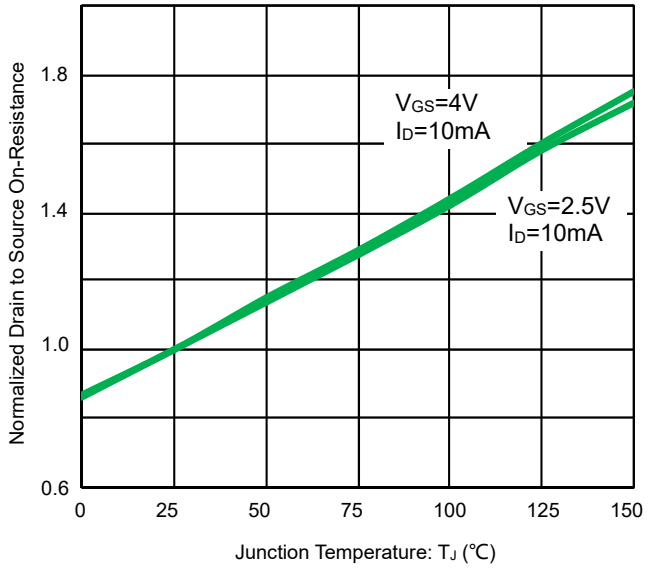


Fig 7. Normalized On-Resistance vs. Junction Temperature

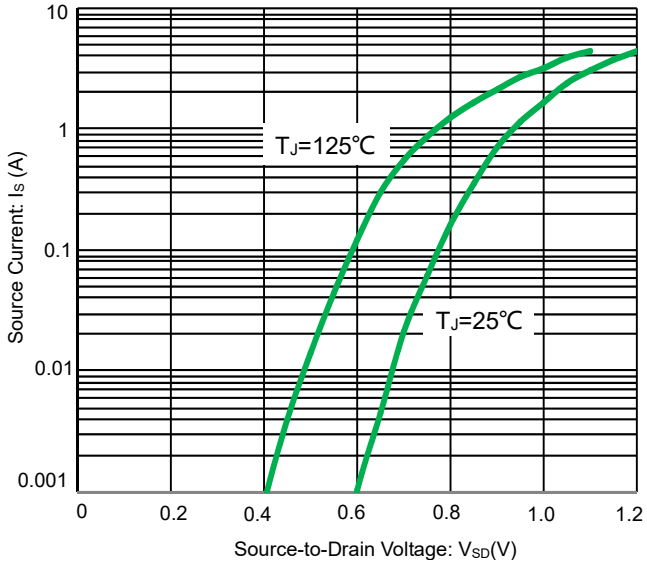
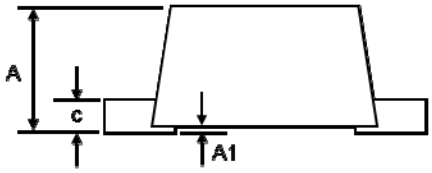
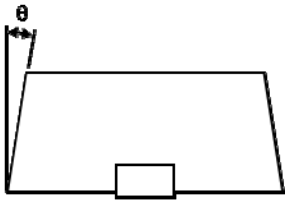


Fig 8. Body diode forward voltage

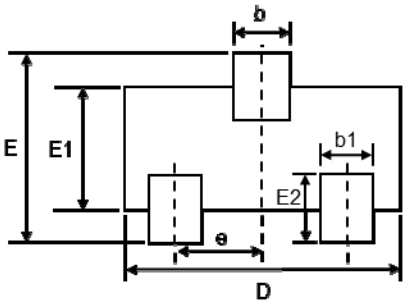
Product dimension (SOT-723)



Side View

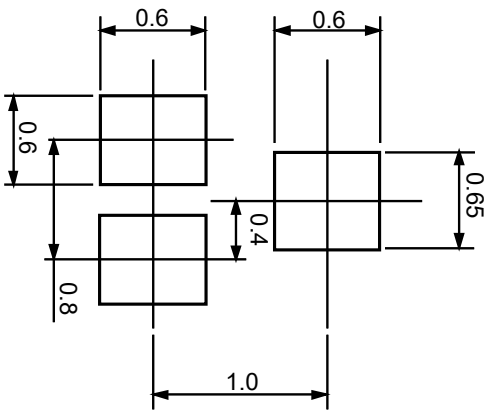


Side View



Bottom View

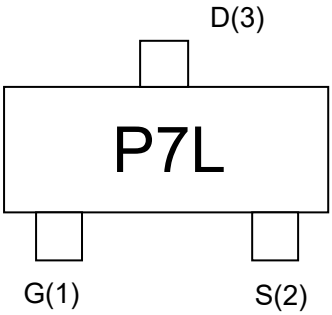
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.40	0.55	0.016	0.022
A1	0.00	0.05	0.000	0.002
b	0.20	0.37	0.008	0.015
b1	0.15	0.27	0.006	0.011
c	0.06	0.18	0.002	0.007
D	1.10	1.30	0.043	0.051
E	1.10	1.30	0.043	0.051
E1	0.70	0.90	0.028	0.035
E2	0.20	0.30	0.008	0.012
e	0.40 Ref.		0.016 Ref.	
θ	5°	9°	5°	9°



Unit：mm

Suggested PCB Layout

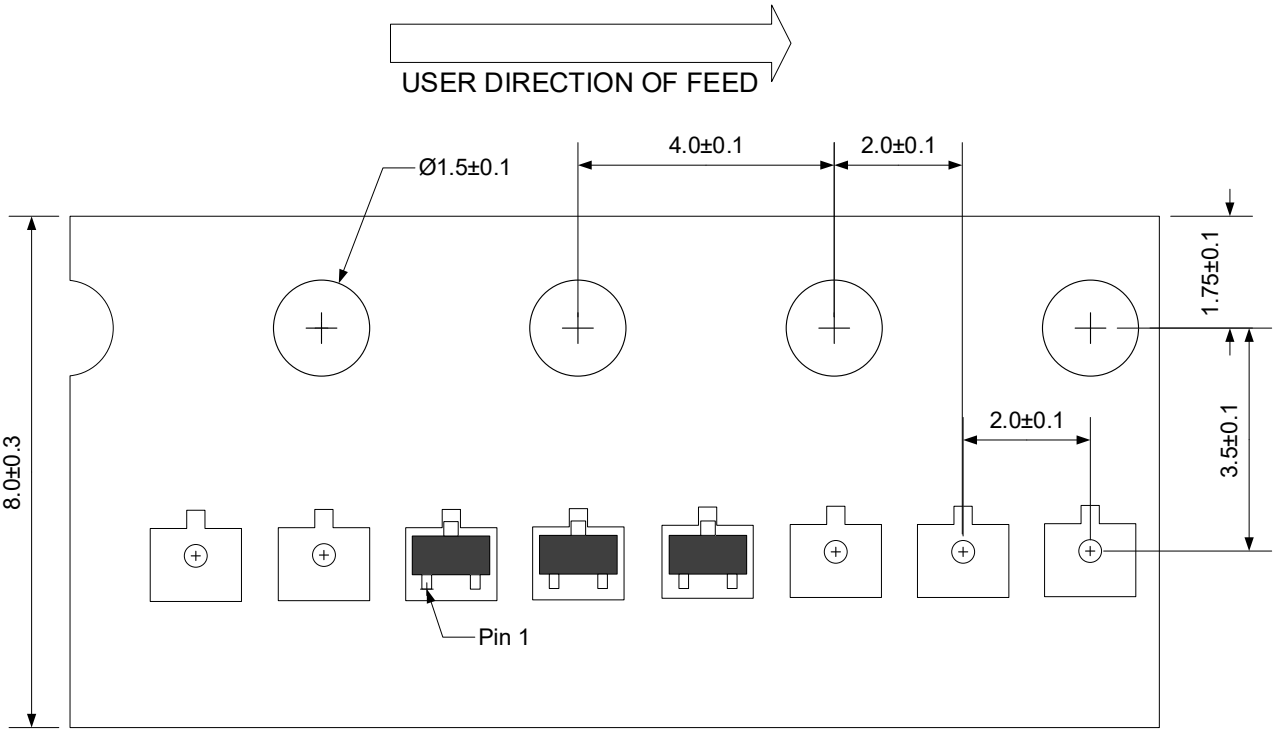
Marking information



Ordering information

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

Load with information



Unit:mm

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