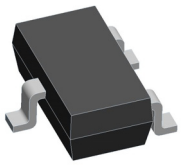
Description

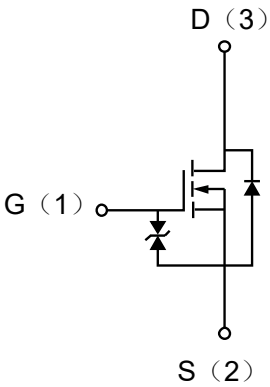
PNM523T703E0-2 is designed for high speed switching applications

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

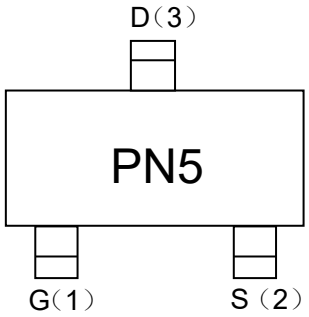
MOSFET Product Summary			
V_{DS}(V)	$R_{DS(on)}$(Ω)	$V_{GS(th)}$(V)	I_D(A)
40	3.5@ V_{GS}=10V	0.5 to 1.3	0.18



SOT-523 (Top View)



Circuit Diagram



Marking (Top View)

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 =250μA,V_{GS}=0V	40	-	-	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	-	1.3	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=5V, I_D =0.05A	-	-	3.5	Ω
		V_{GS}=10V, I_D =0.5A	-	-	3.5	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	-	-	40	pF
Output Capacitance	C_{DSS}		-	-	20	pF
Reverse Transfer Capacitance	C_{RSS}		-	-	5	pF

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
DYNAMIC PARAMETERS						
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	-	
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}	40	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

Typical Characteristics

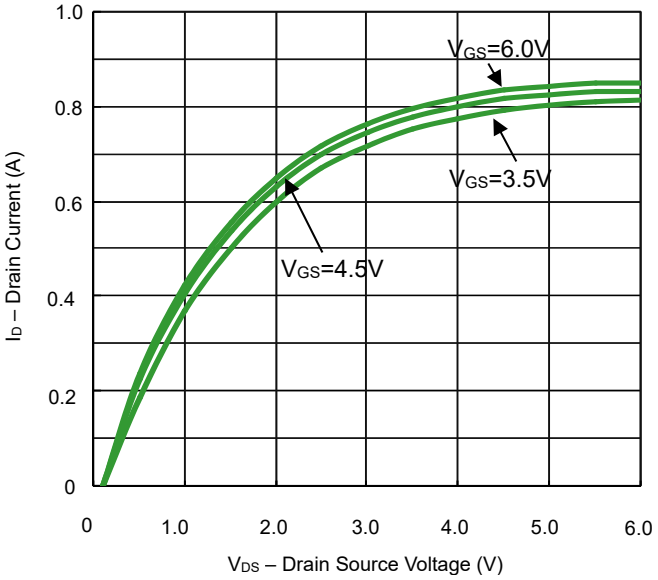


Fig 1. Output Characteristics

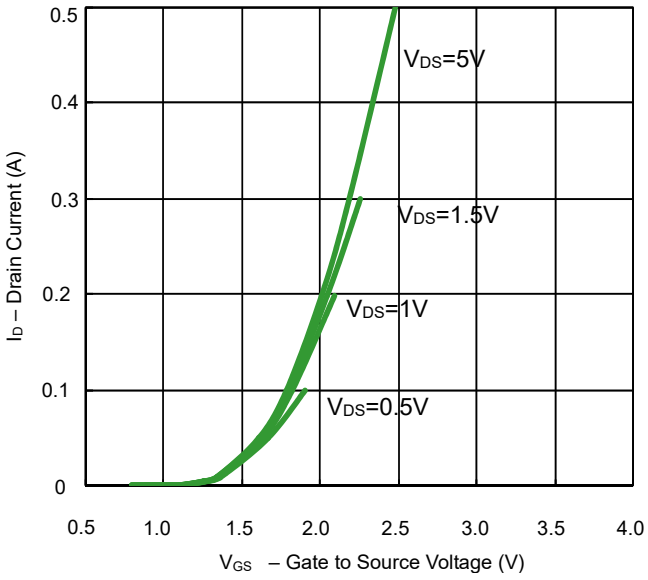


Fig 2. Transfer Characteristics

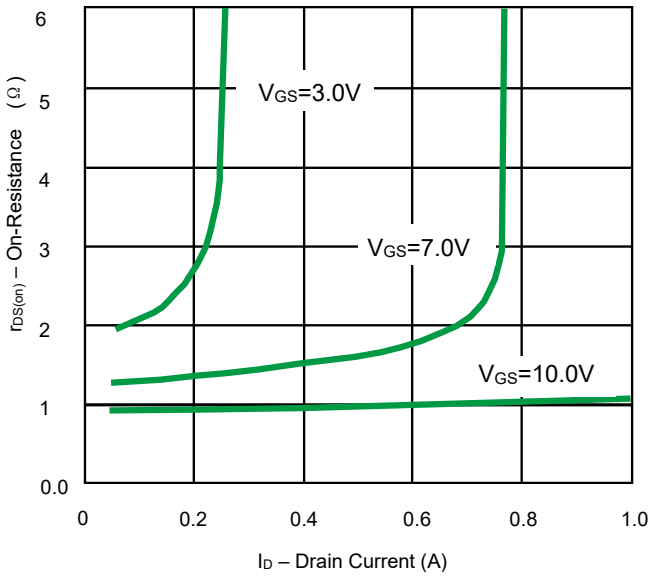


Fig 3. On-Resistance vs. Drain Current

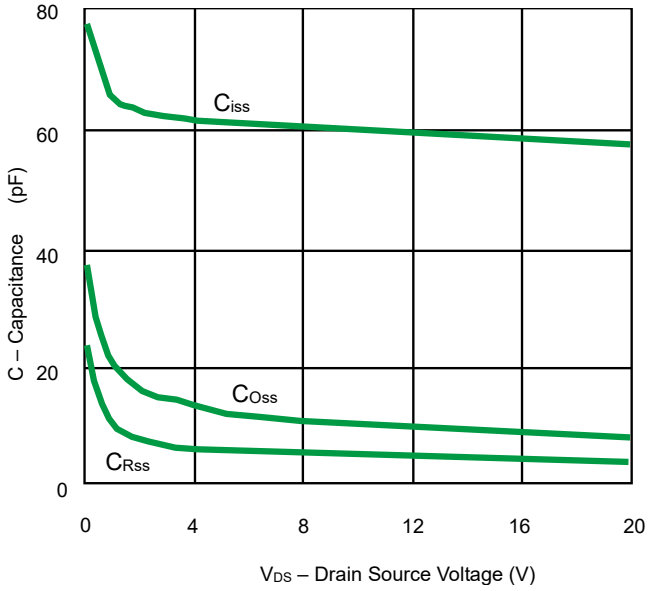
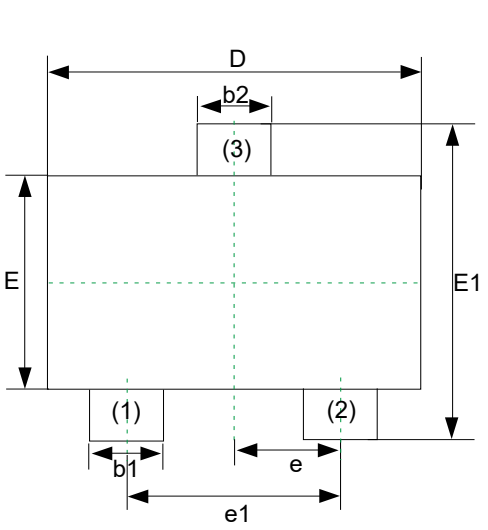
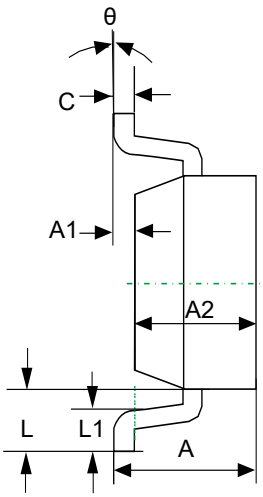


Fig 4. Capacitance

Product dimension（SOT-523）



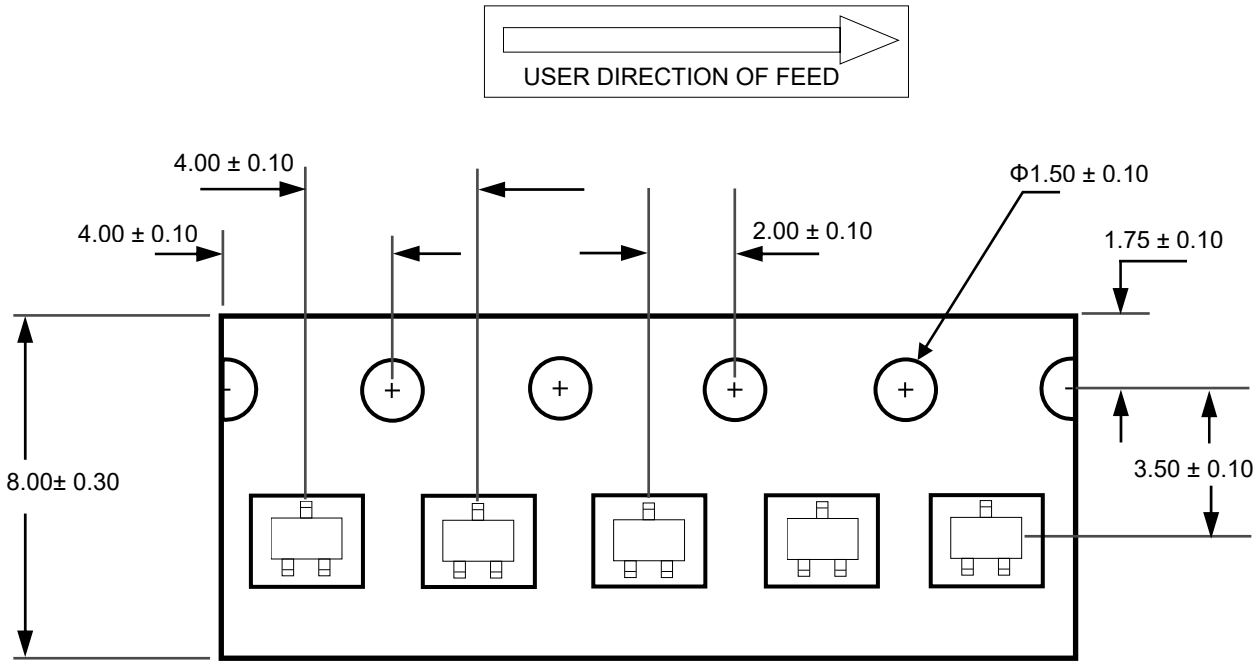


Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Ordering information

Device	Package	Reel	Shipping
PNM523T703E0-2	SOT-523 (Pb-Free)	7"	3000 / Tape & Reel

Load with information



Unit：mm

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