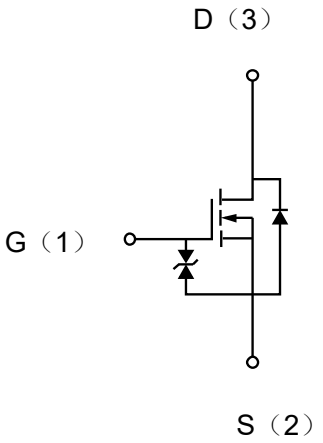
Description

The MOSFET provide the best combination of fast switching, low on-resistance and cost-effectiveness.

MOSFET Product Summary		
V_{DS}(V)	$R_{DS(on)}$(Ω)	I_D(A)
20	0.2@ V_{GS}=4.5V	1
	0.25@ V_{GS}=2.5V	
	0.31@ V_{GS}=1.8V	
ESD	HBM	MM
	Pass 500V	Pass 100V



Absolute maximum rating@25℃

Parameter		Symbol	Value	Units
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	±10	V
Continuous Drain Curren(T_J=150℃)	Continuous	I_D	1	A
	Pulsed	I_{DP}	4	
Total power dissipation		P_D	140	mW
Channel temperature		T_{CH}	150	℃
Range of storage temperature		T_{STG}	-55 to +150	℃

Thermal resistance

Parameter	Symbol	Limits	Units
Channel to ambient	Rth(ch-a)	800	℃/W

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Drain-Source Breakdown Voltage	BV_{DSS}	I_D =1mA,V_{GS}=0V	20		-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =20V,V_{GS}=0V	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	V_{DS} =0V,V_{GS}=±8V	-	-	±10	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} =5V, I_D =1mA	0.5	-	1.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=4.5V, I_D =650mA	-	0.2	0.25	Ω
		V_{GS}=2.5V, I_D =450mA	-	0.25	0.3	Ω
		V_{GS}=1.8V, I_D =250mA		0.31	0.45	Ω
Forward transfer admittance	| Yfs |	V_{DS}=10V, I_D =300mA	395			ms
Input Capacitance	C_{ISS}	V_{GS}=0V, V_{DS} =10V, f=1MHz	-	30		pF
Output Capacitance	C_{OSS}		-	13		pF
Reverse Transfer Capacitance	C_{RSS}		-	3		pF
Turn-On Delay Time	$t_{d(on)}$	V_{DD}≒10V, V_{GS} =4.0V, R_G=10Ω,R_L=67Ω I_D =150mA	-	7		ns
Turn-Off Delay Time	$t_{d(off)}$		-	23		ns
Turn-On Rise Time	t_r		-	15		ns
Turn-On Fall Time	t_f		-	15		ns
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V,I_S=100mA		-	1.2	V
Total Gate Charge	Qg	V_{GS}=4.5V, V_{DS} =10V, I_D =0.55A		0.54		nC
Gate-Source Charge	Qgs			0.08		nC
Gate-Drain Charge	Qgd			0.15		nC

Typical Characteristics

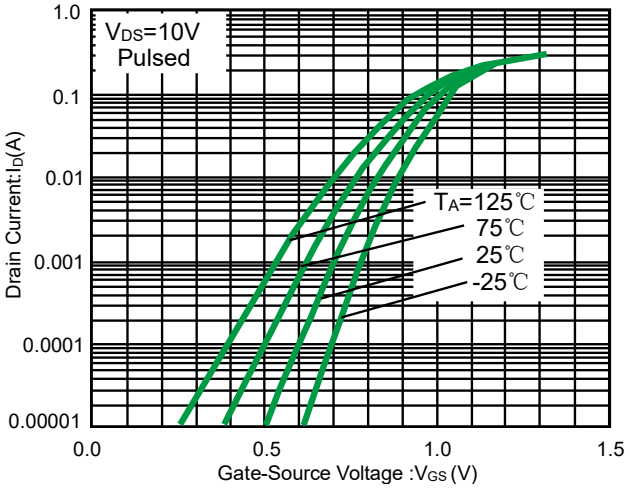


Fig 1. Typical transfer Characteristics

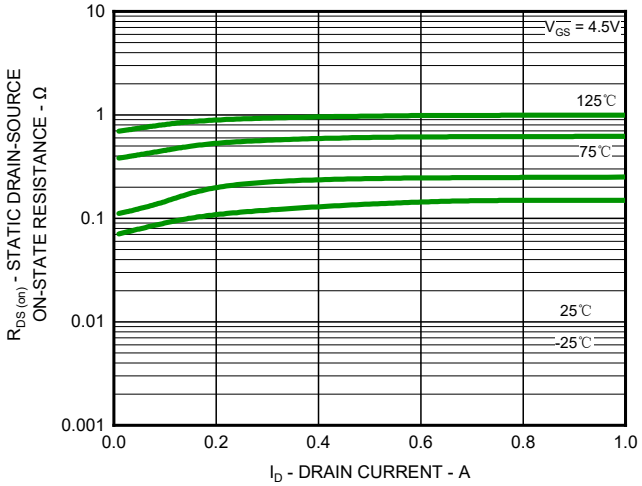


Fig 2. Static drain-source on-state resistance vs. drain current(Ⅰ)

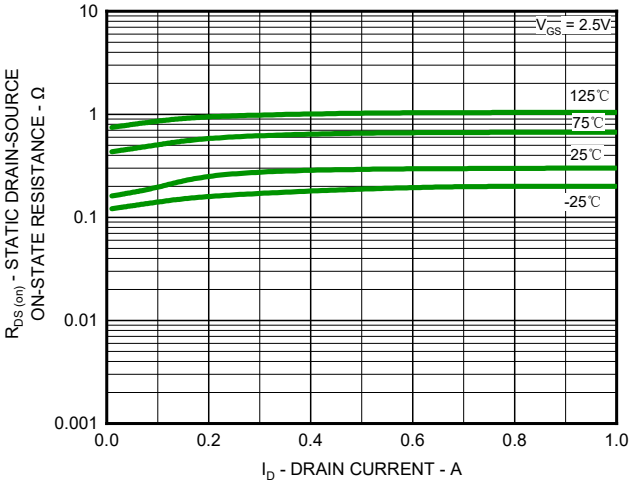


Fig 3. Static drain-source on-state resistance Vs. drain current (Ⅱ)

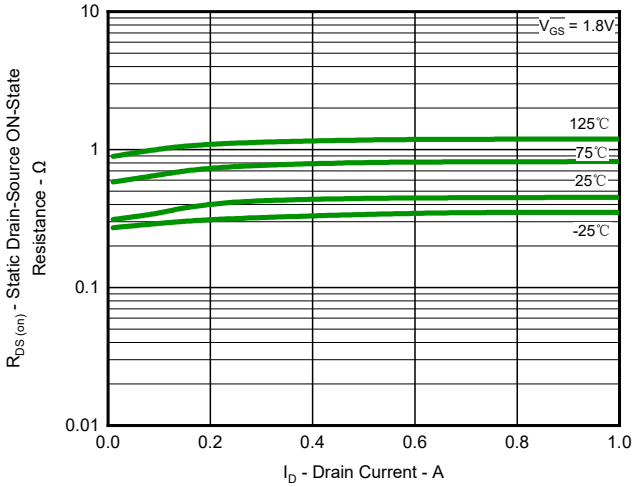


Fig 4. Static drain-source on-state resistance vs. drain current (Ⅲ)

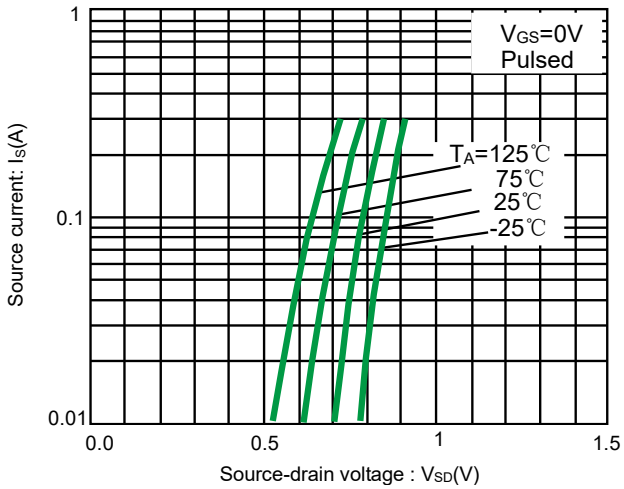


Fig 5. Source current vs. source-drain voltage

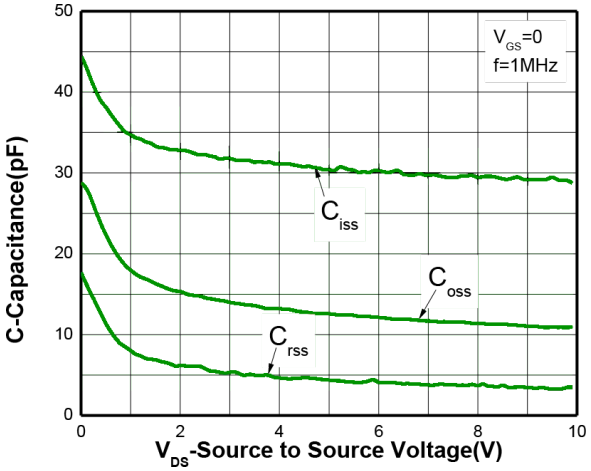


Fig 6. Typical capacitance vs. drain-source voltage

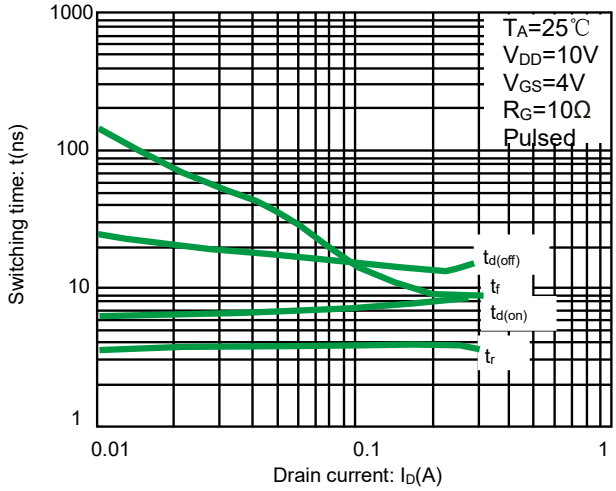


Fig 7. Switching characteristics

Switching characteristics measurement circuit

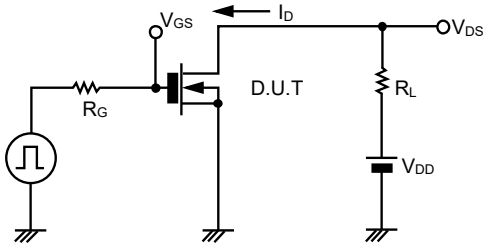


Fig.8 Switching time measurement circuit

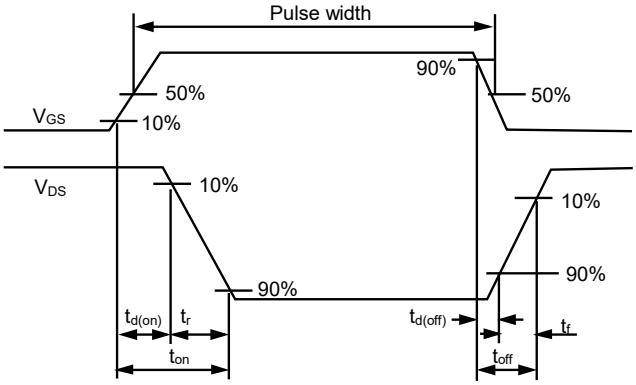
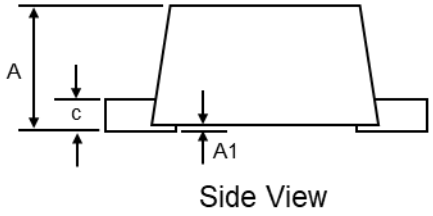
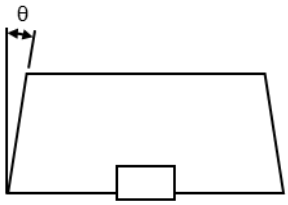


Fig.9 Switching time waveforms

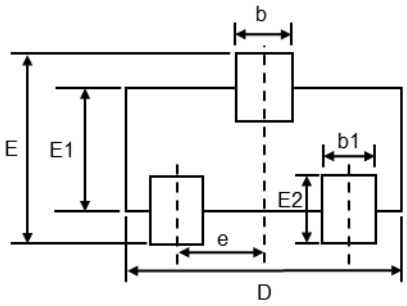
Product dimension (SOT-723)



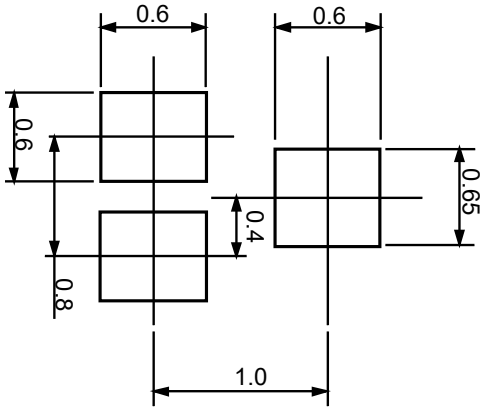
Side View



Side View



Bottom View



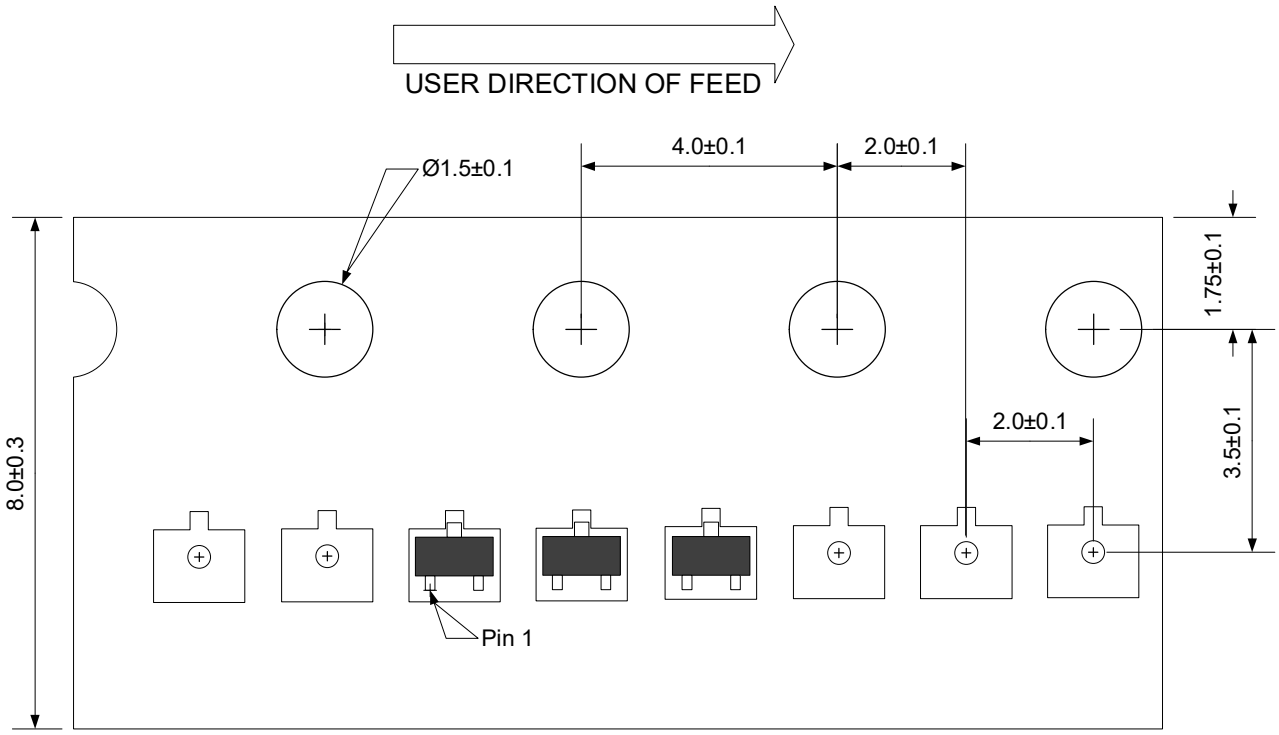
Unit：mm

Dim	Millimeters	
	Min	Max
A	0.40	0.55
A1	0.00	0.05
b	0.20	0.37
b1	0.15	0.27
c	0.06	0.18
D	1.10	1.30
E	1.10	1.30
E1	0.70	0.90
E2	0.20	0.30
e	0.40 Ref.	
θ	5°	9°

Ordering information

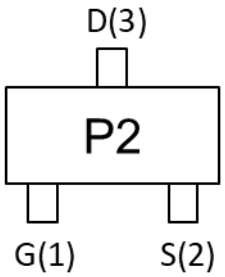
Device	Package	Shipping
PNM723T201E0	SOT-723 (Pb-Free)	10000 / Tape & Reel

Load with information



Unit:mm

Marking information



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