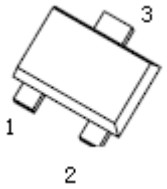
N- Channel MOSFET

SOT-723

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
30V	8Ω@4V	100mA
	13Ω@2.5V	



1. GATE
2. SOURCE
3. DRAIN

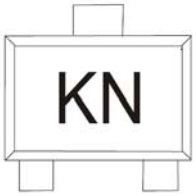
FEATURES

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Drive circuits can be simple
- Parallel use is easy

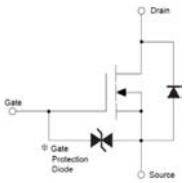
APPLICATION

- Interfacing , Switching

MARKING



Equivalent Circuit



Maximum ratings (Ta=25℃ unless other wise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	30	V
Gate-source voltage	V_{GS}	±20	
Continuous drain current	I_D	±100	mA
Power dissipation	P_D	0.15	W
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	℃/W
Junction temperature	T_J	150	℃
Storage temperature	T_{stg}	-55 ~+150	

* Pw≤10μs ,Duty cycle≤1%

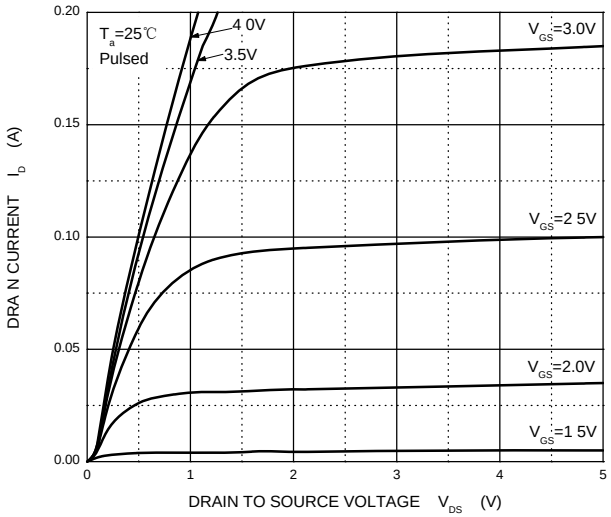
MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

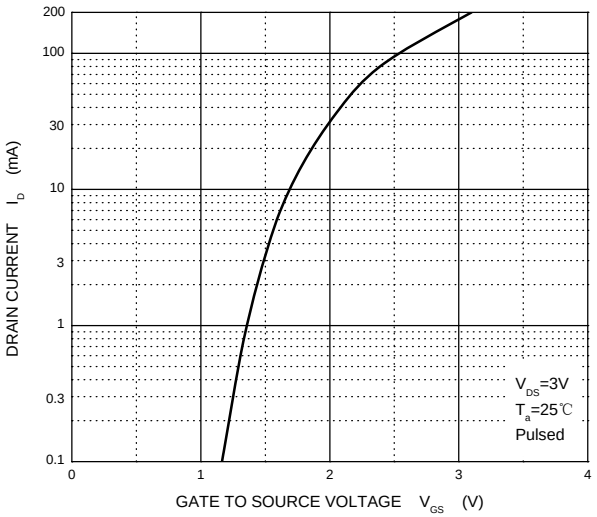
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)\ DSS}$	V_{GS} = 0V, I_D =10μA	30			V
Gate-source leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±2	μA
Zero gate voltage drain current	I_{DSS}	V_{DS} =30V, V_{GS} =0V			1.0	μA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =3V, I_D =100μA	0.8		1.5	V
Static drain-source on-state resistance	$R_{DS(on)}$	V_{GS} =4V, I_D =10mA		5	8	Ω
		V_{GS} =2.5V, I_D =1mA		7	13	
Forward transconductance	g_{FS}	V_{DS} =3V, I_D =10mA	20			mS
Input capacitance	C_{iss}	V_{DS} =5V,V_{GS} =0V,f =1MHz		13		pF
Output capacitance	C_{oss}			9		
Reverse transfer capacitance	C_{rss}			4		
Turn-on delay time	$t_{d(on)}$	V_{GS}=5V,V_{DD}=5V, I_D =10mA R_L=500Ω,R_G=10Ω		15		ns
Rise time	t_r			35		
Turn-off delay time	$t_{d(off)}$			80		
Fall time	t_f			80		

Typical Characteristics

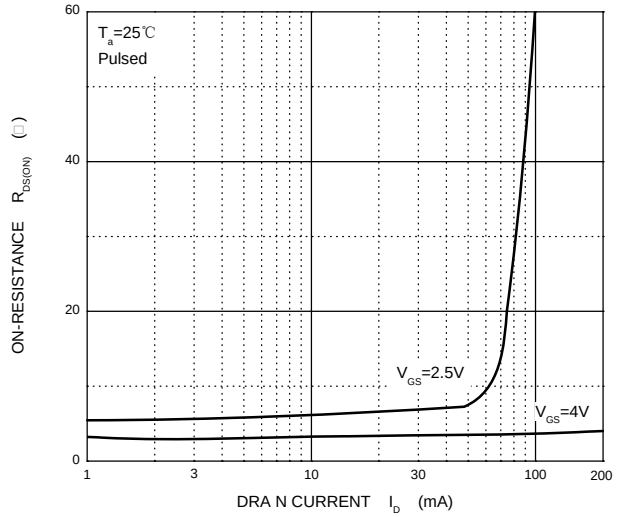
Output Characteristics



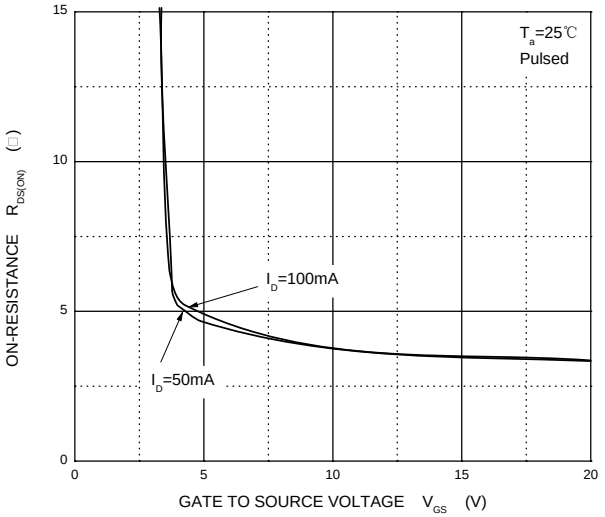
Transfer Characteristics



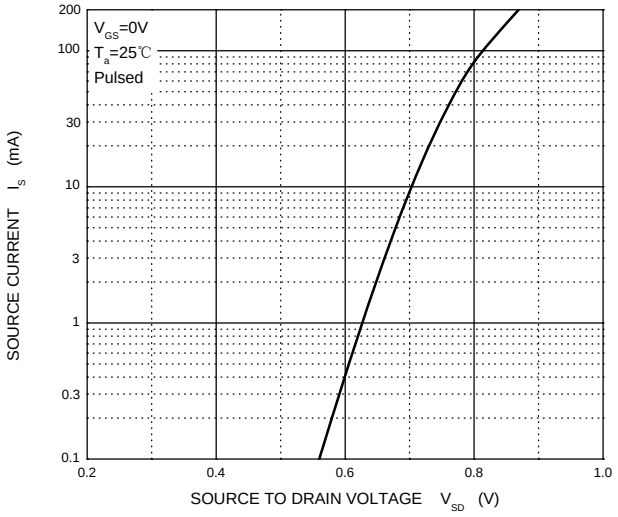
$R_{DS(ON)}$ —— I_D



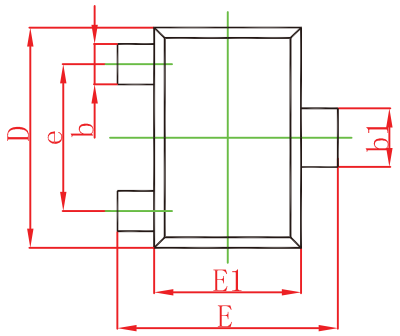
$R_{DS(ON)}$ —— V_{GS}

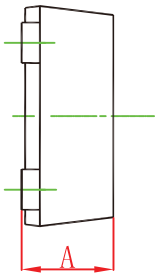


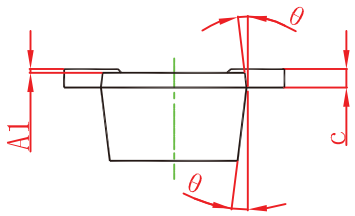
I_S —— V_{SD}



SOT-723 Package Outline Dimensions

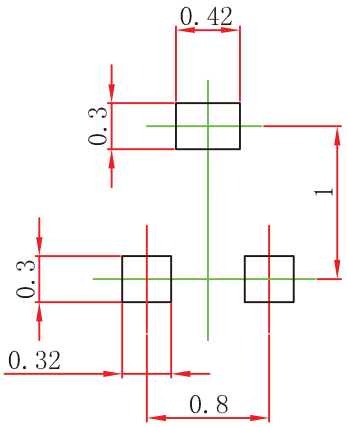






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		0.500		0 020
A1	0.000	0 050	0.000	0 002
b	0.170	0 270	0.007	0 011
b1	0.270	0.370	0.011	0 015
c		0.150		0 006
D	1.150	1 250	0.045	0 049
E	1.150	1 250	0.045	0 049
E1	0.750	0.850	0.030	0 033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

SOT-723 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.