



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
30V	320mΩ@4.5V	0.6A
	410mΩ@2.5V	

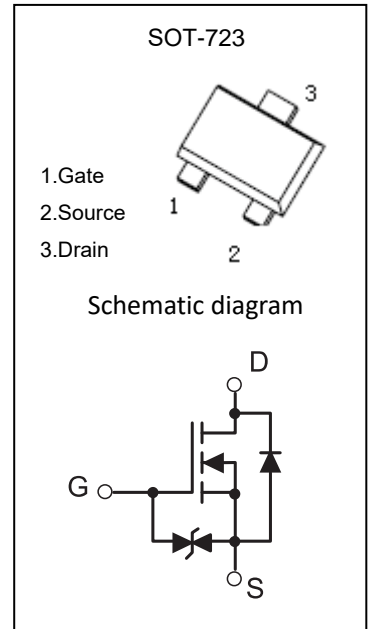
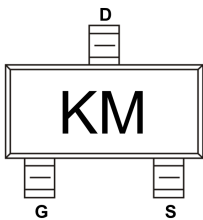
Feature

- Surface Mount Package
- N-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive
- ESD Protect

Application

- Load/Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

MARKING:



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	0.6	A
Pulsed Drain Current ⁽¹⁾	I_{DM}	2.4	A
Power Dissipation ⁽²⁾	P_D	150	mW
Thermal Resistance from Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

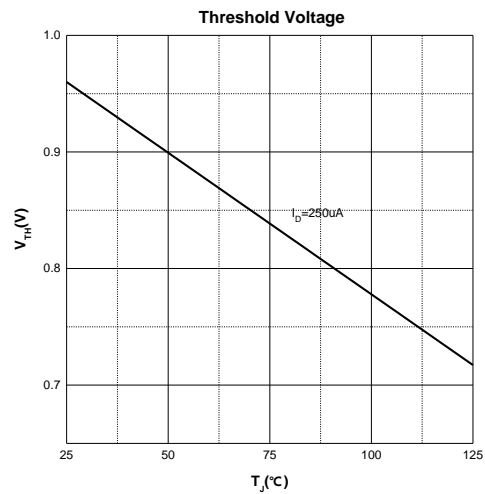
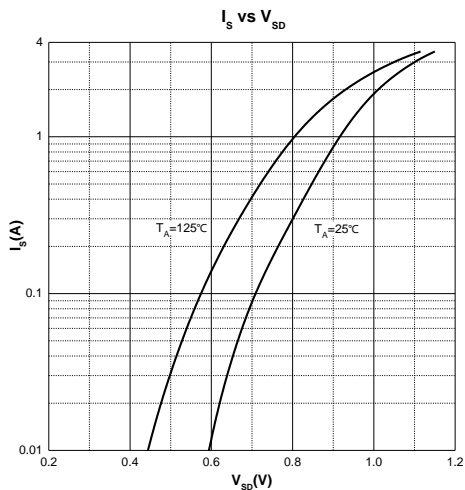
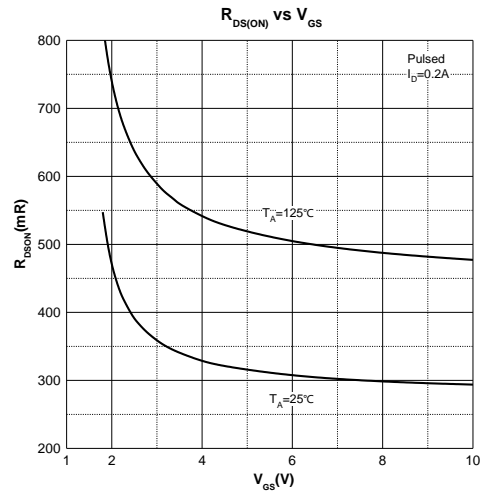
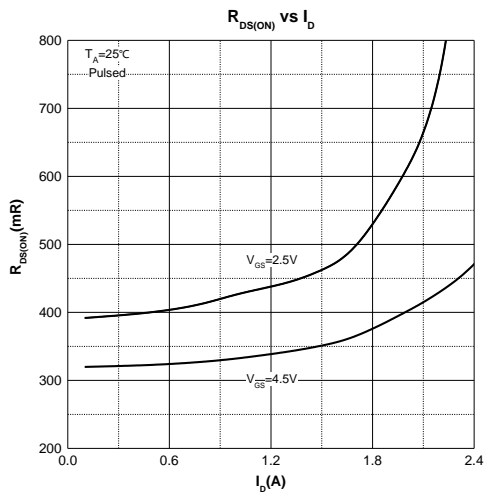
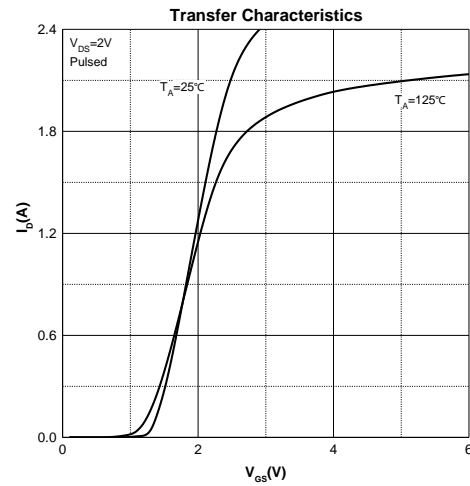
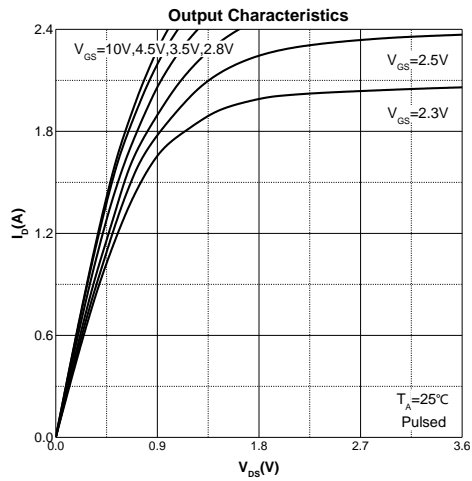
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =30V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±3	μA
Gate threshold voltage ⁽³⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5	1.0	1.5	V
Drain-source on-resistance ⁽³⁾	R _{DS(on)}	V _{GS} =4.5V, I _D =0.6A		320	500	mΩ
		V _{GS} =2.5V, I _D =0.3A		410	600	
Forward tranconductance	g _{FS}	V _{DS} =5V, I _D =0.5A	0.1			S
Dynamic characteristics⁽⁴⁾						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		44		pF
Output Capacitance	C _{oss}			15		
Reverse Transfer Capacitance	C _{rss}			8		
Total gate charge	Q _g	V _{DS} =15V, V _{GS} =4.5V, I _D =0.8A		1.2		nC
Gate-source charge	Q _{gs}			0.28		
Gate-drain charge	Q _{gd}			0.3		
Switching Characteristics⁽⁴⁾						
Turn-on delay time	t _{d(on)}	V _{DS} =15V, I _D =0.7A, V _{GS} =4.5V, R _G =51Ω		5.0		ns
Turn-on rise time	t _r			8.2		
Turn-off delay time	t _{d(off)}			23		
Turn-off fall time	t _f			41		
Source-Drain Diode characteristics						
Diode Forward voltage ⁽³⁾	V _{DS}	I _S =0.6A, V _{GS} = 0V		0.87	1.2	V

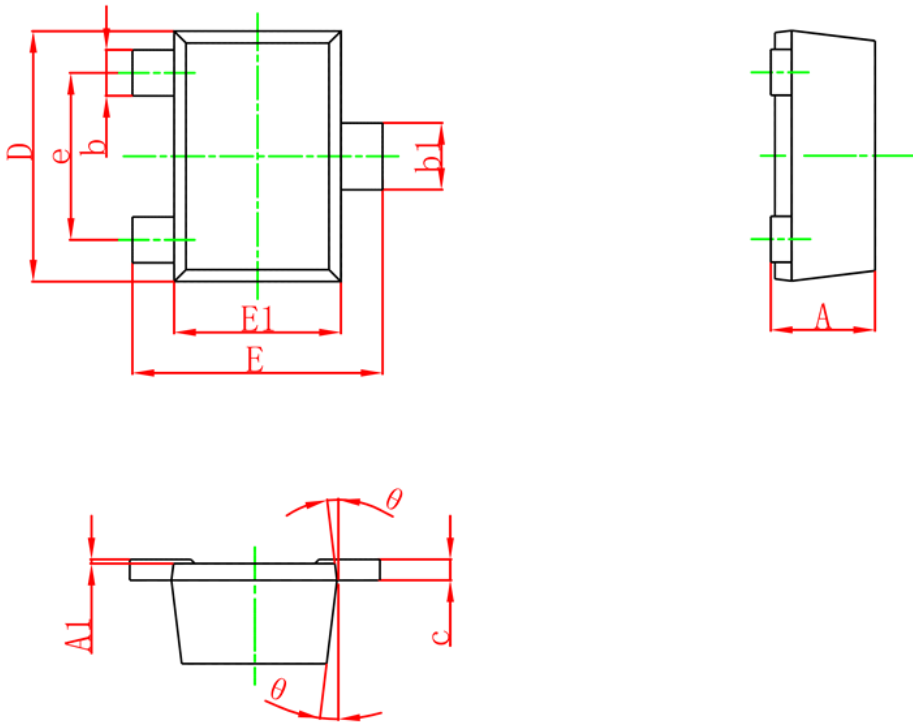
Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_a=25°C.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

Typical Characteristics



SOT-723 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.340	0.500	0.013	0.020
A1	0.000	0.050	0.000	0.002
b	0.150	0.270	0.006	0.011
b1	0.200	0.370	0.008	0.015
c	0.060	0.160	0.002	0.006
D	1.100	1.300	0.043	0.051
E	1.100	1.300	0.043	0.051
E1	0.700	0.900	0.028	0.035
e	0.8TYP		0.031TYP	
θ	8°REF		8°REF	