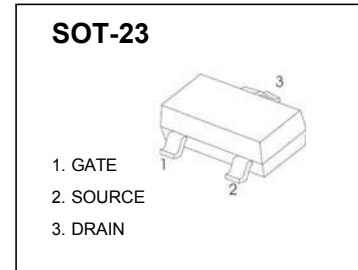


N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
100 V	234mΩ@10V	2A
	267mΩ@ 6V	
	278mΩ@4.5V	



FEATURE

- TrenchFET Power MOSFET
- Low $R_{DS(ON)}$
- Surface Mount Package

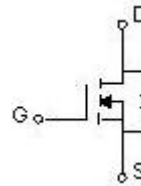
APPLICATION

- DC/DC Converters
- Load Switch
- LED Backlighting in LCD TVs

MARKING



Equivalent Circuit



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	2	A
Pulsed Drain Current	I_{DM}^*	8	A
Maximum Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}C$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^{\circ}C$

*Repetitive rating: Pulse width limited by junction temperature.

MOSFET ELECTRICAL CHARACTERISTICS

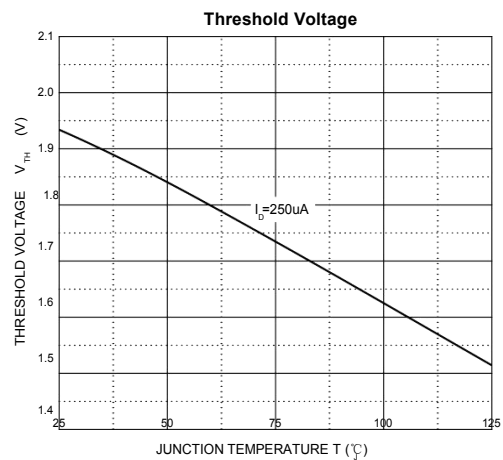
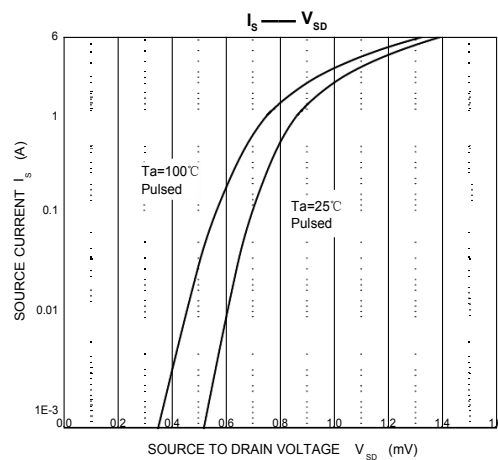
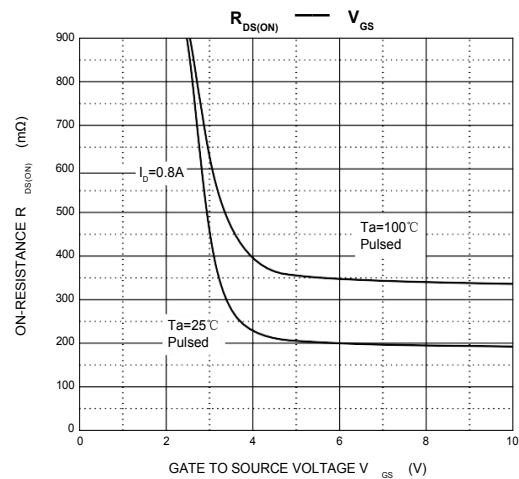
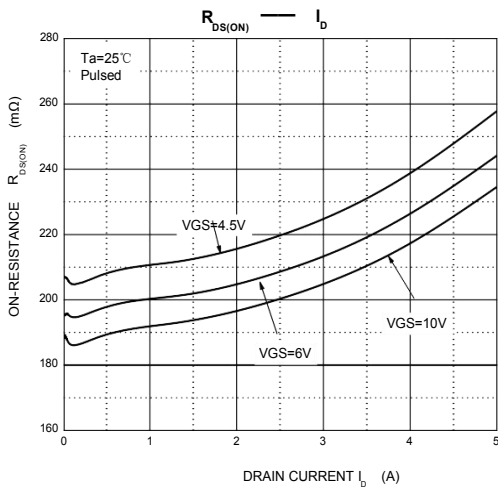
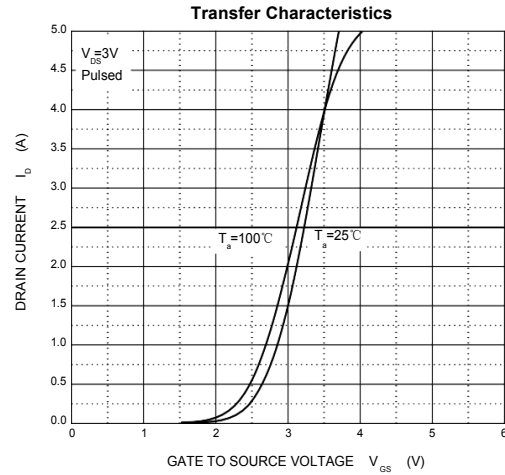
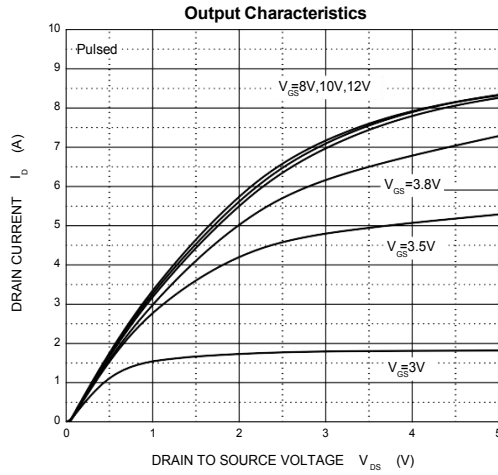
T_a=25 °C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 100V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage(note 1)	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.2		2.8	V
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} = 10V, I _D = 1.5A			234	mΩ
		V _{GS} = 6V, I _D = 1A			267	mΩ
		V _{GS} = 4.5V, I _D = 0.5A			278	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} = 20V, I _D = 1.5A		2		S
Diode forward voltage (note 1)	V _{SD}	I _S = 1.3A, V _{GS} = 0V			1.2	V
DYNAMIC PARAMETERS (note2)						
Input Capacitance	C _{iSS}	V _{DS} = 50V, V _{GS} = 0V, f = 1MHz		190		pF
Output Capacitance	C _{oSS}			22		pF
Reverse Transfer Capacitance	C _{rSS}			13		pF
Gate Resistance	R _g	F = 1MHz	0.3		2.8	Ω
SWITCHING PARAMETERS (note 2)						
Turn-on delay time	t _{d(on)}	V _{DD} = 50V, V _{GEN} = 4.5V R _L = 39Ω, R _G = 1Ω, I _D = 1.3A			45	ns
Turn-on rise time	t _r				39	ns
Turn-off delay time	t _{d(off)}				26	ns
Turn-off fall time	t _f				20	ns
Total Gate Charge	Q _g	V _{DS} = 50V, V _{GS} = 4.5V, I _D = 1.6A			5.8	nC
Gate-Source Charge	Q _{gs}			0.75		nC
Gate-Drain Charge	Q _{gd}			1.4		nC

Notes : 1. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 0.5%.

2. Guaranteed by design, not subject to production testing.

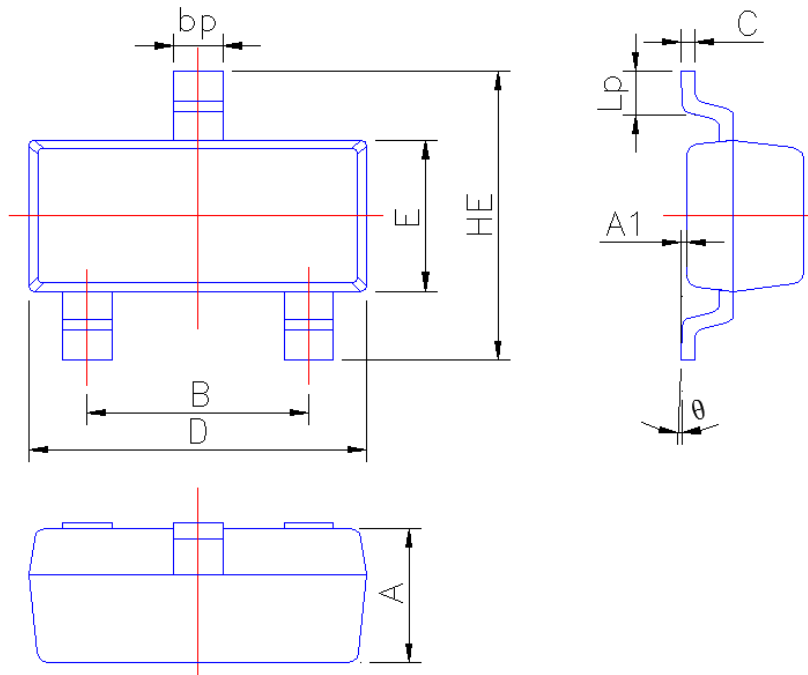
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
θ	0°	5°