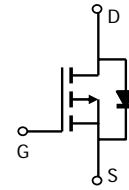


P-Channel Enhancement Mode Field Effect Transistor

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	60 mΩ@-10V	-4.2A
	70 mΩ@-4.5V	
	85 mΩ@-2.5V	



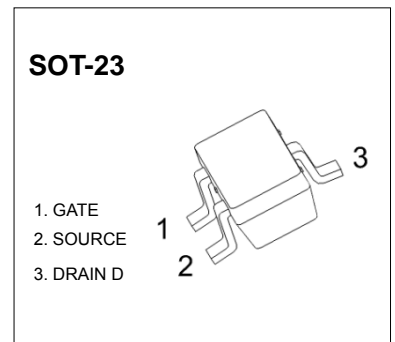
Equivalent Circuit

FEATURE

- High dense cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

APPLICATION

- Load Switch for Portable Devices
- DC/DC Converter



Maximum ratings ($T_a=25^{\circ}C$ 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	-4.2	A
Power Dissipation	P_D	450	mW
Thermal Resistance from Junction to Ambient (t<5s)	$R_{\theta JA}$	313	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}C$

MOSFET ELECTRICAL CHARACTERISTICS
T_a=25 °C unless otherwise specified

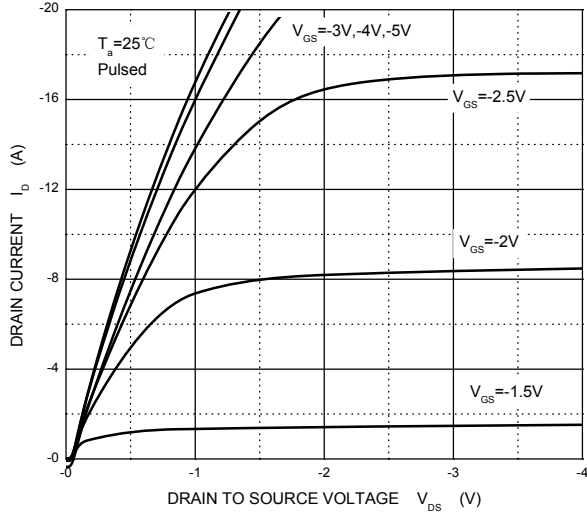
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -24V, V _{GS} = 0V			-1	μA
Gate-source leakage current	I _{GSS}	V _{GS} = ±12V, V _{DS} = 0V			±100	nA
On characteristics						
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} = -10V, I _D = -4.2A			60	mΩ
		V _{GS} = -4.5V, I _D = -4A			70	mΩ
		V _{GS} = -2.5V, I _D = -1A			85	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} = -5V, I _D = -5A	7			S
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.7		-1.3	V
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		1050		pF
Output capacitance	C _{oss}			127		pF
Reverse transfer capacitance	C _{rss}			85		pF
Switching characteristics (note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} = -10V, V _{DS} = -15V, R _L = 3.6Ω, R _{GEN} = 6Ω			6.5	ns
Turn-on rise time	t _r				3.5	ns
Turn-off delay time	t _{d(off)}				40	ns
Turn-off fall Time	t _f				13	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 1)	V _{SD}	I _S = -1A, V _{GS} = 0V			-1	V

Note :

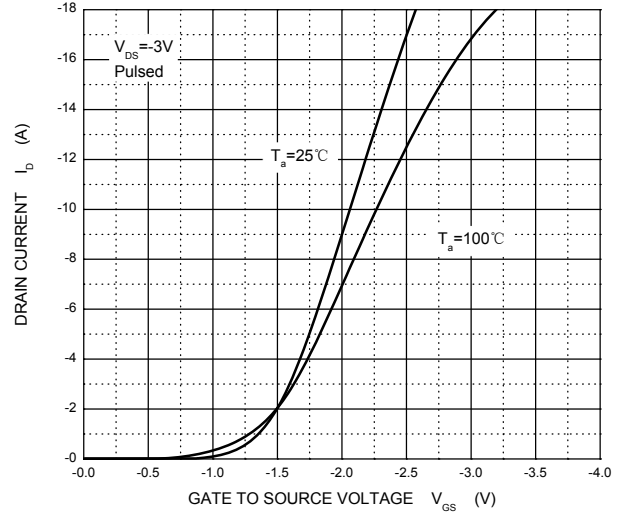
1. Pulse Test : Pulse width ≤ 300μs, duty cycles ≤ 2%.
2. These parameters have no way to verify.

Typical Characteristics

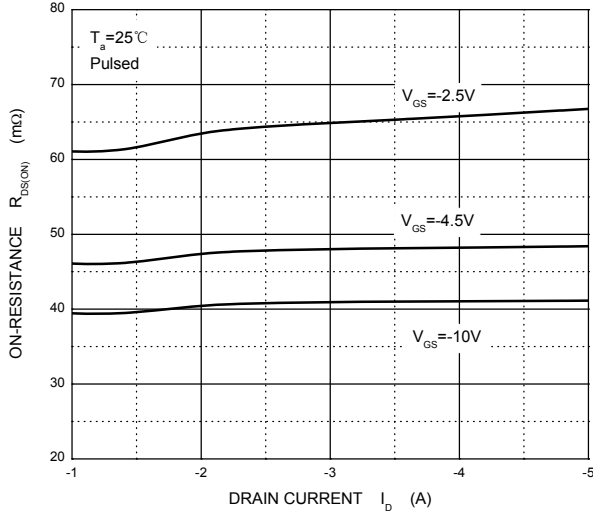
Output Characteristics



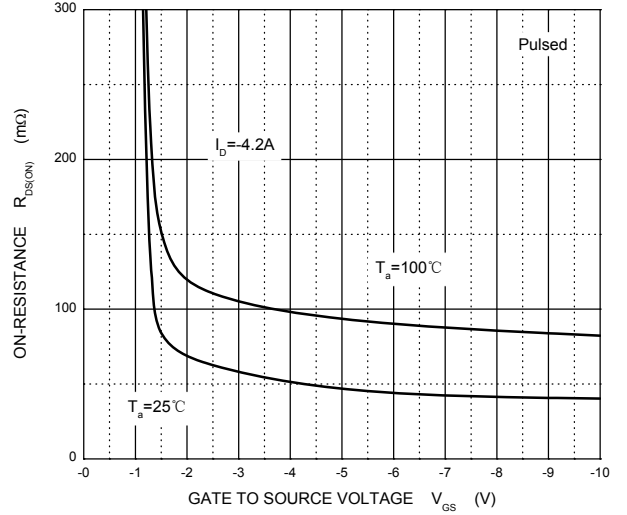
Transfer Characteristics



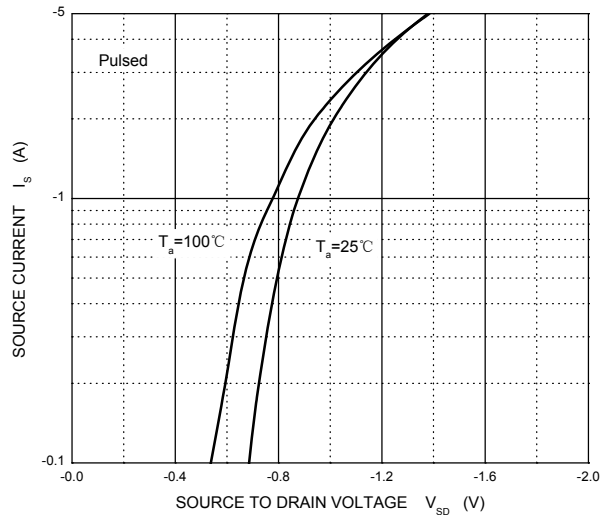
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage

