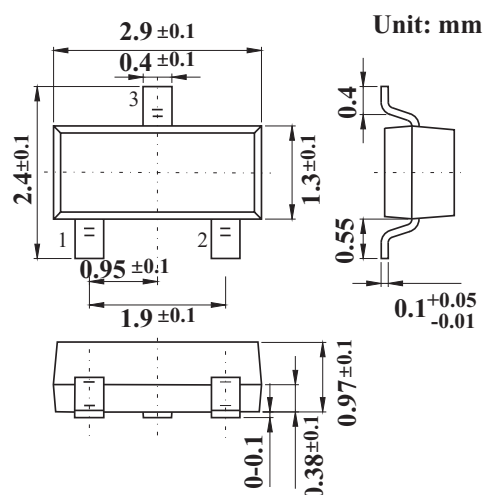


SOT-23 Plastic-Encapsulate MOSFETS
FEATURE

- TrenchFET Power MOSFET
- P-Channel Enhancement Mode Field Effect Transistor

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any


MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-4.1	A
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	60mΩ@-10V	-4.1A
	87mΩ@-4.5V	

MOSFET ELECTRICAL CHARACTERISTICS $T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static characteristics						
Drain-source breakdown voltage	BV _{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} =±20V, V _{DS} = 0V			±100	nA
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =-10V, I _D =-4.1A		50	60	mΩ
		V _{GS} =-4.5V, I _D =-3A		68	87	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =-5V, I _D =-4A	5.5			S
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1	-1.4	-3	V
Diode forward voltage (note 1)	V _{SD}	I _S =-1A,V _{GS} =0V			-1	V
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} =-15V,V _{GS} =0V,f =1MHz		700		pF
Output capacitance	C _{oss}			120		pF
Reverse transfer capacitance	C _{rss}			75		pF
Switching Characteristics (note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} =-10V,V _{DS} =-15V, R _L =3.6Ω,R _{GEN} =3Ω		8.6		ns
Turn-on rise time	t _r			5.0		ns
Turn-off delay time	t _{d(off)}			28.2		ns
Turn-off fall time	t _f			13.5		ns

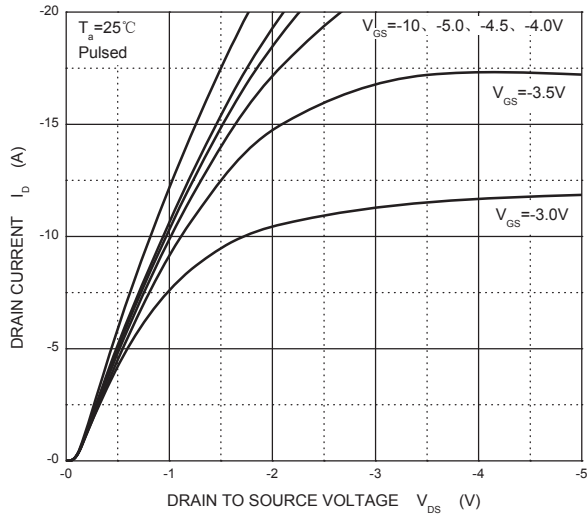
Notes:

1. Pulse test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.

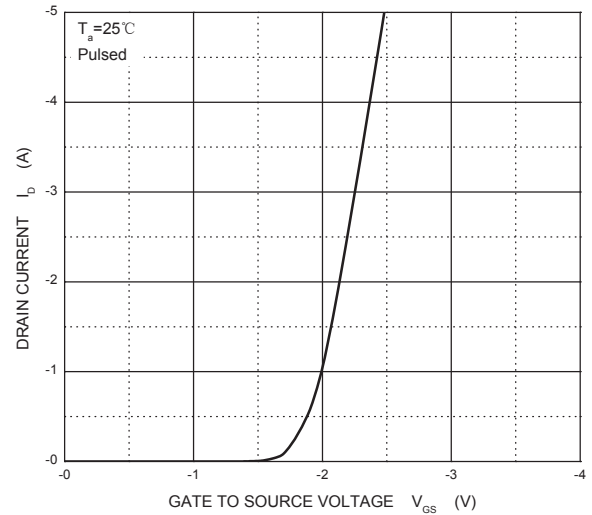
RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

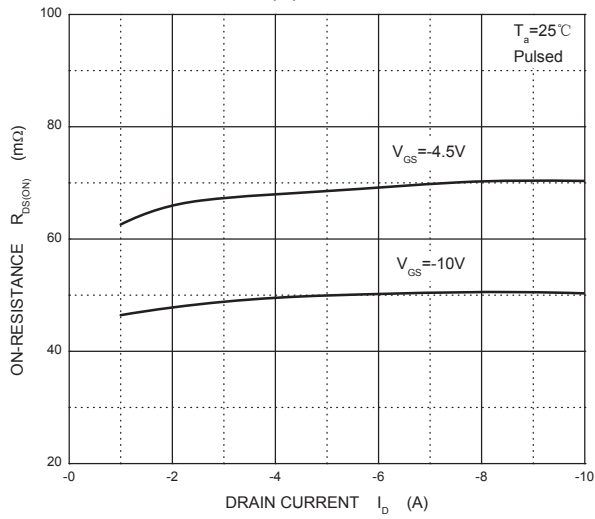
Output Characteristics



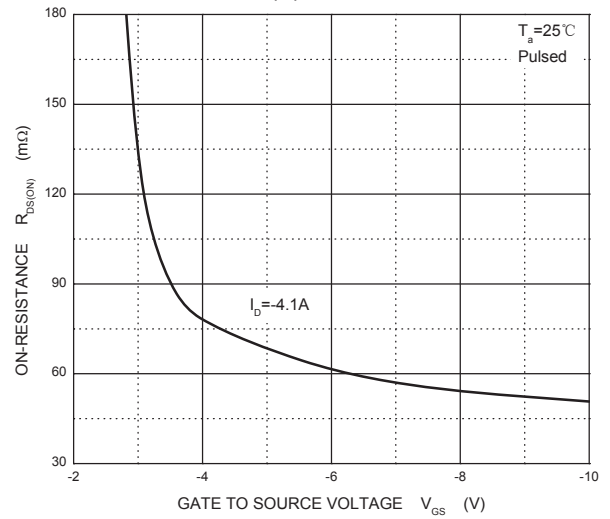
Transfer Characteristics



$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

