



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-40V	180mΩ@-10V	-3.4A
	230mΩ@-4.5V	

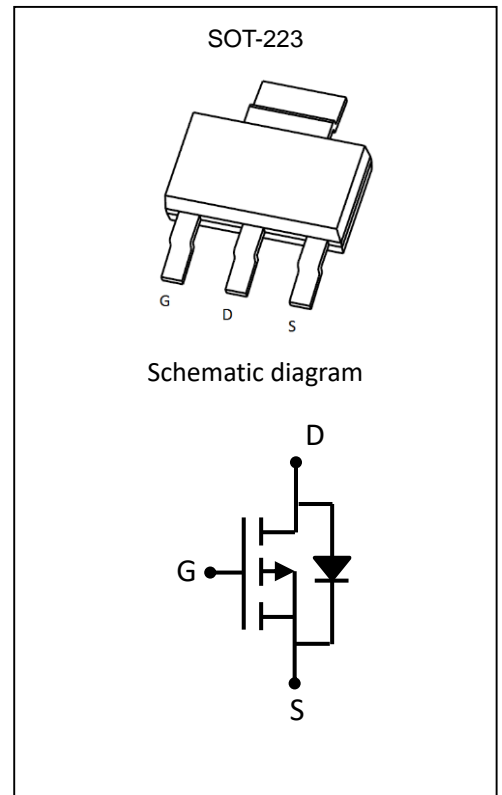
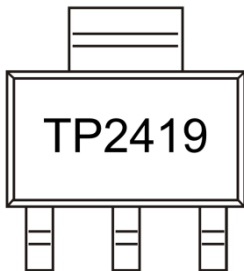
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-40	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-3.4	A
Power Dissipation	P_D	1	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	125	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

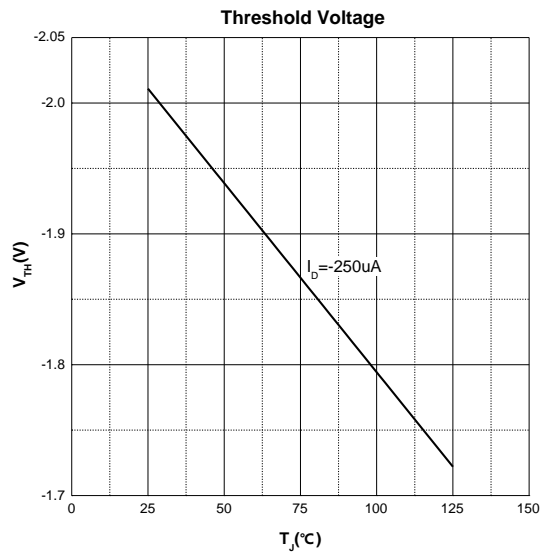
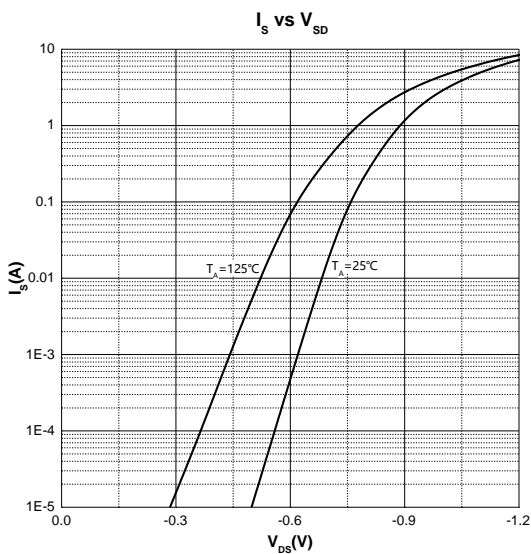
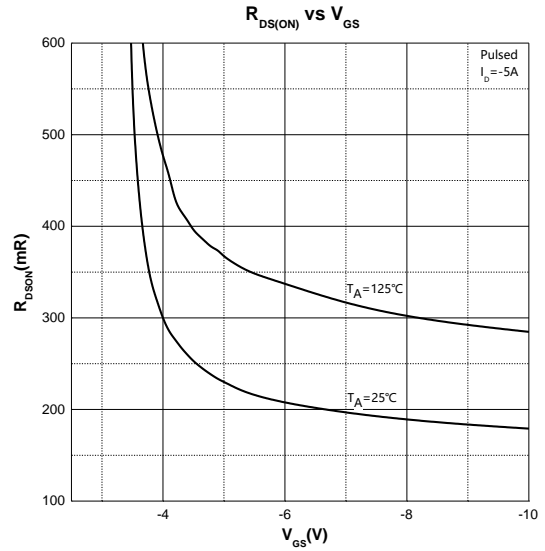
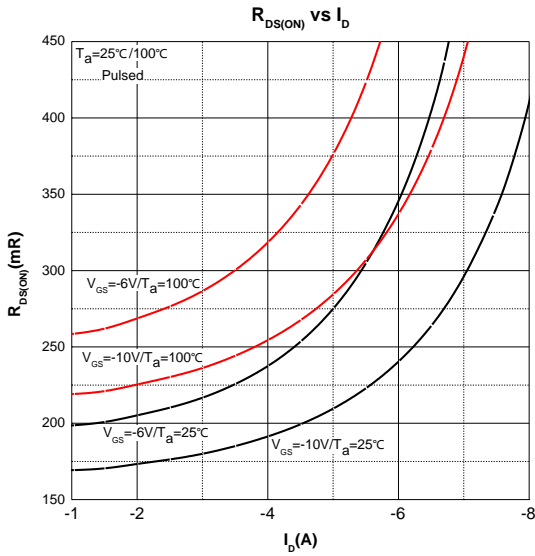
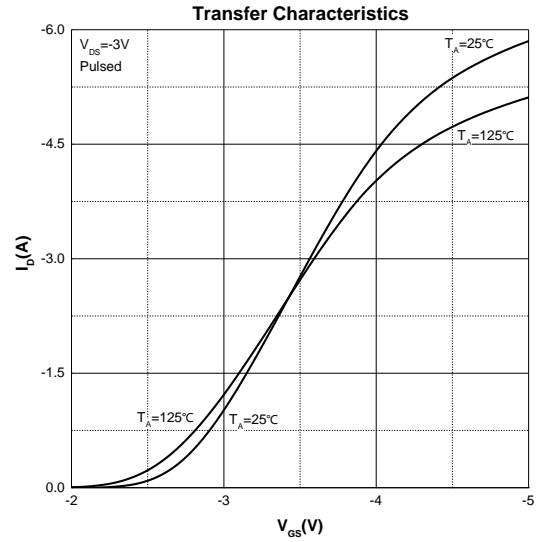
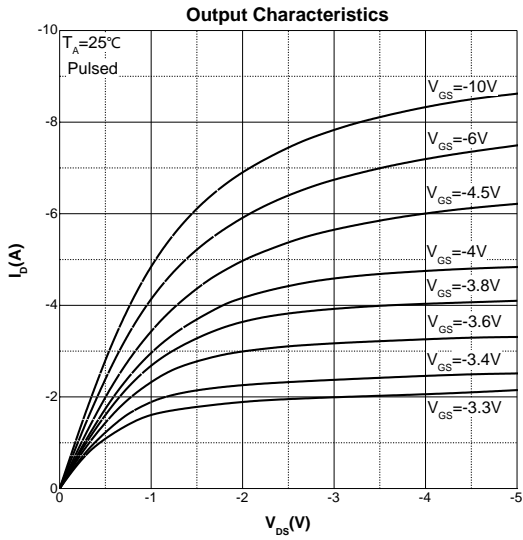
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-40			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -40V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1	-2	-3	V
Drain-source on-resistance ¹	R _{DS(on)}	V _{GS} = -10V, I _D = -3.4A		180	250	mΩ
		V _{GS} = -4.5V, I _D = -2.7A		230	300	
Dynamic characteristics²						
Input Capacitance	C _{iss}	V _{DS} = -20V, V _{GS} = 0V, f = 1MHz		245		pF
Output Capacitance	C _{oss}			22		
Reverse Transfer Capacitance	C _{rss}			18		
Total Gate Charge	Q _g	V _{DS} = -20V, V _{GS} = -4.5V, I _D = -1.9A		2.5		nC
Gate-Source Charge	Q _{gs}			0.65		
Gate-Drain Charge	Q _{gd}			2		
Turn-on delay time	t _{d(on)}	V _{DD} = -20V, V _{GEN} = -10V, I _D = -1.5A R _L = 10Ω, R _{GEN} = 1Ω		4.5		ns
Turn-on rise time	t _r			11.5		
Turn-off delay time	t _{d(off)}			12		
Turn-off fall time	t _f			8.5		
Source-Drain Diode characteristics						
Diode Forward voltage	V _{DS}	V _{GS} = 0V, I _S = -2.5A		-0.95	-1.2	V

Notes:

1. Pulse Test : Pulse Width ≤300μs, Duty Cycle ≤2%.
2. Guaranteed by design, not subject to production testing.

Typical Electrical Characteristics



SOT-223 Package Information

尺寸 标注	最小 (mm)	最大 (mm)	尺寸 标注	最小 (mm)	最大 (mm)
A	6.40	6.60	C	1.45	1.65
e	2.286 (BSC)		C1	0.03	0.15
b	0.66	0.76	C2	0.20	0.35
b1	2.95	3.05	L	0.76	1.16
B	3.40	3.60	L1	1.70	1.80
B1	6.85	7.15	θ	0°	8°

