

FEATURES

- RDS(ON) < 47mΩ @ VGS = 10V
- RDS(ON) < 65mΩ @ VGS = 4.5V
- TrenchFET Power MOSFET

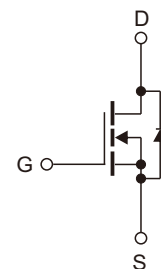
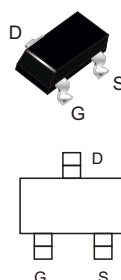


Product Summary			
V _{DS}	R _{DS(on)} (mΩ) Typ	I _D (A)	Q _g (Typ)
30V	38 @ 10V	3.5	3.0nc
	52 @ 4.5V	2.8	

MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any

SOT-23



N-channel MOSFET

Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Drain-Source voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current (T _J = 150°C)	I _D	3.16	A
Maximum Power Dissipation @ T _A = 25°C	P _o	0.75	W
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Thermal Resistance Ratings

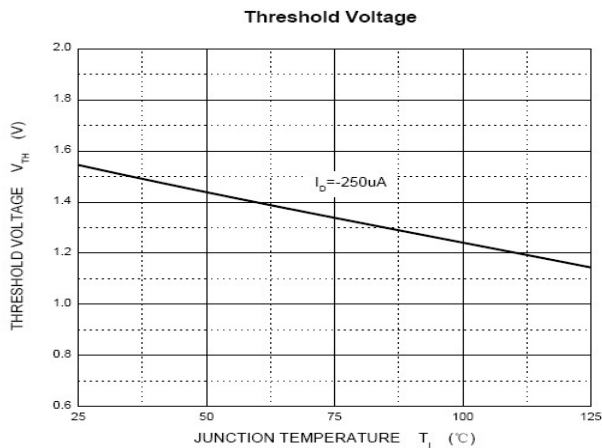
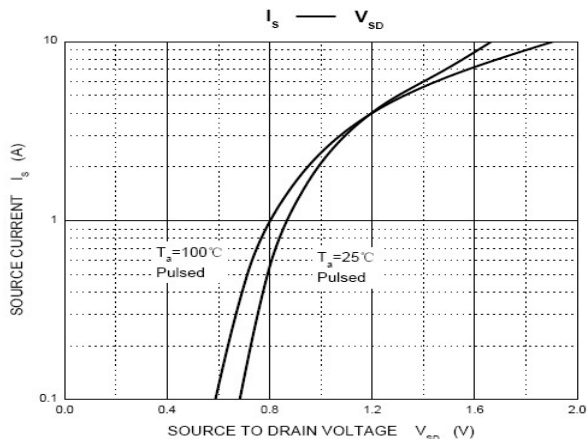
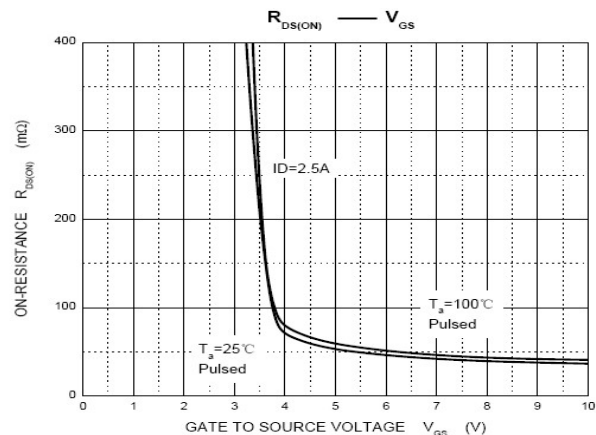
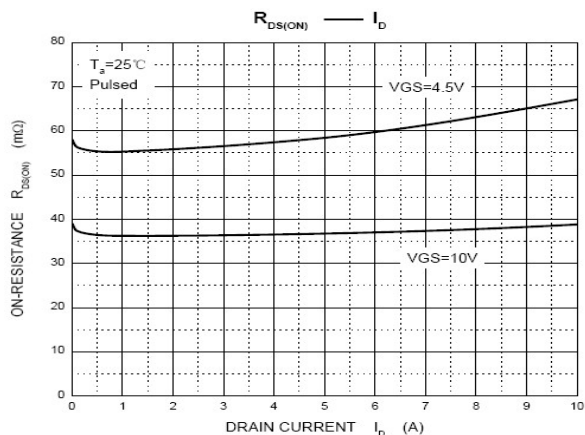
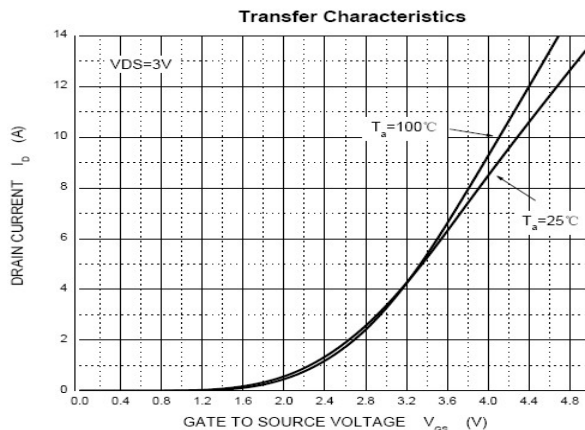
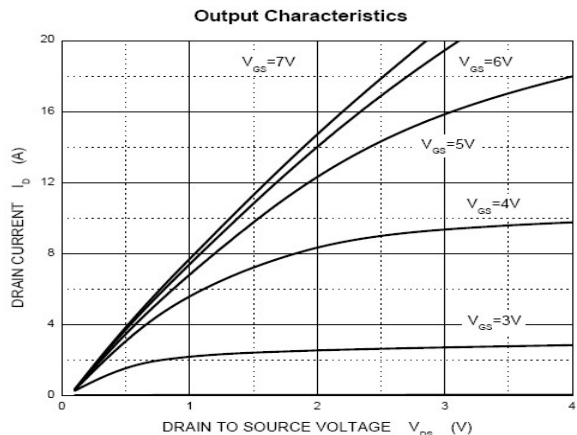
Parameters	Symbol	Typ	Max	Unit
Junction to Ambient, Steady State ²⁾	R _{θJA}	-	100	°C/W

2. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

Electrical Characteristics (T_J=25°C unless otherwise noted)

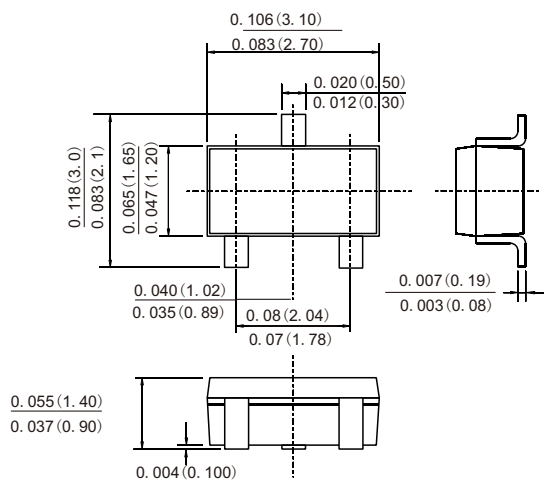
Parameters	Symbol	Conditions	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	30	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V, T _C =25°C	-	-	0.5	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} = ±10V, V _{DS} =0V	-	-	±100	nA
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	-	3.0	V
Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =4.5V, I _D =2.8A	-	52	65	mΩ
		V _{GS} =10V, I _D =3.5A	-	38	47	
Dynamic						
Input Capacitance	C _{iss}	V _{DS} =15V, V _{GS} =0V, f=1MHz	-	305	-	pF
Output Capacitance	C _{oss}		-	65	-	
Reverse Transfer Capacitance	C _{rss}		-	29	-	
Total Gate Charge	Q _g	V _{DS} =15V, V _{GS} =5V, I _D =2.5A	-	3.0	4.5	nC
Gate-Source Charge	Q _{gs}	V _{DS} =15V, V _{GS} =10V, I _D =2.5A	-	1.6	-	
Gate-Drain Charge	Q _{gd}		-	0.6	-	
Turn-on Delay Time	t _{D(on)}	V _{DD} =15V, R _L =15Ω, I _D =1A, R _{GEN} =10Ω, R _G =6Ω	-	7	11	ns
Turn-on Rise Time	t _r		-	12	18	
Turn-off Delay Time	t _{D(off)}		-	14	25	
Turn-Off Fall Time	t _f		-	6	10	
Drain-Source Body Diode Characteristics						
Maximum Body-Diode Continuous Current	I _S		-	-	0.62	A
Diode Forward Voltage	V _{SD}	I _S =1.25A, V _{GS} =0V	-	0.8	1.2	V

Typical characteristics



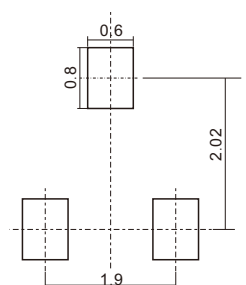
PACKAGE OUTLINE DIMENSIONS

SOT-23



Dimensions in inches and (millimeters)

Suggested Pad Layout



Dimensions in millimeters

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