

## FEATURES

- RDS(ON)<140mΩ@VGS=-2.5V
- RDS(ON)<110mΩ@VGS=-4.5V
- TrenchFET Power MOSFET

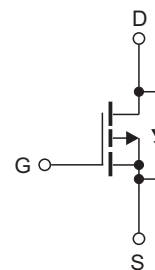
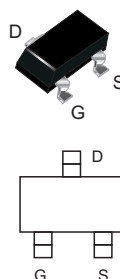


Product Summary			
V <sub>DS</sub>	R <sub>DS(on)</sub> (mΩ) Typ	I <sub>D</sub> (A)	Q <sub>g</sub> (Typ)
-20V	89 @ -2.5V	-2	3.3nc
	64 @ -4.5V	-3	

## MECHANICAL DATA

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

SOT-23



P-channel MOSFET

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Drain-Source voltage	V <sub>DS</sub>	-20	V
Gate-Source Voltage	V <sub>GS</sub>	±12	V
Continuous Drain Current (T <sub>J</sub> = 150°C)	I <sub>D</sub>	-2.3	A
Maximum Power Dissipation @T <sub>A</sub> =25°C	P <sub>o</sub>	1	W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

## Thermal Resistance Ratings

Parameters	Symbol	Typ	Max	Unit
Junction to Ambient, Steady State <sup>2)</sup>	R <sub>θJA</sub>	-	104	°C/W

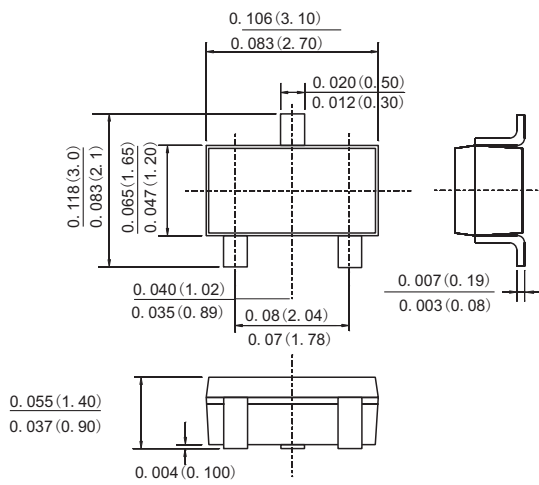
2. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

Electrical Characteristics (T<sub>J</sub>=25°C unless otherwise noted)

Parameters	Symbol	Conditions	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> =-250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-20V, V <sub>GS</sub> =0V, T <sub>C</sub> =25°C	-	-	-1	μA
Gate-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = 12V, V <sub>DS</sub> =0V	-	-	100	nA
Gate-Source Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> =-250μA	-0.4	-0.7	-1	V
Drain-Source On-State Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> = -4.5V, I <sub>D</sub> =-3A	-	64	110	mΩ
		V <sub>GS</sub> = -2.5V, I <sub>D</sub> =-2A	-	89	140	
Dynamic						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-10V, V <sub>GS</sub> =0V, f=1MHz	-	405	-	pF
Output Capacitance	C <sub>oss</sub>		-	75	-	
Reverse Transfer Capacitance	C <sub>rss</sub>		-	55	-	
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =-10V, V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-3A	-	3.3	12	nC
Gate-Source Charge	Q <sub>gs</sub>		-	0.7	-	
Gate-Drain Charge	Q <sub>gd</sub>		-	1.3	-	
Turn-on Delay Time	t <sub>D(on)</sub>	V <sub>GS</sub> =-4.5V, V <sub>DD</sub> =-10V, I <sub>D</sub> =-1A, R <sub>GEN</sub> =10Ω	-	11	-	ns
Turn-On Rise Time	t <sub>r</sub>		-	35	-	
Turn-off Delay Time	t <sub>D(off)</sub>		-	30	-	
Turn-Off Fall Time	t <sub>f</sub>		-	10	-	
Drain-Source Body Diode Characteristics						
Maximum Body-Diode Continuous Current	I <sub>S</sub>		-	-	-1.3	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1.3A, V <sub>GS</sub> =0V	-	-	-1.2	V

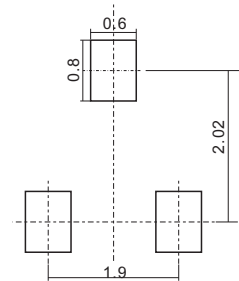
PACKAGE OUTLINE DIMENSIONS

SOT-23



Dimensions in inches and (millimeters)

Suggested Pad Layout



Dimensions in millimeters

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