

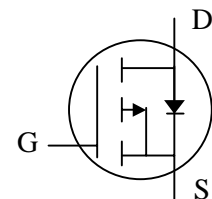
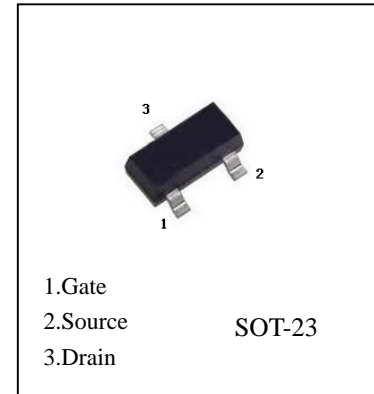
## FEATURES

- High dense cell design for extremely low  $R_{DS(ON)}$
- Rugged and reliable
- Case Material: Molded Plastic.

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

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V <sub>DS</sub>	-12	V
Gate-source Voltage	V <sub>GS</sub>	± 8	V
Drain Current (Continuous)	I <sub>D</sub>	-4.1	A
Drain Current (Pulsed) <sup>a</sup>	I <sub>DM</sub>	-10	A
Total Power Dissipation @TA=25°C	P <sub>D</sub>	0.35	W
Operating Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150	°C
Thermal Resistance Junction to Ambient (PCB mounted) <sup>b</sup>	R <sub>JA</sub>	357	°C/W

## P-Channel MOSFET



Electrical Characteristics (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>Static</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	-12			V
Gate-source threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	-0.5		-0.9	
Gate-source leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0V, V <sub>GS</sub> = ±8V			±100	nA
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = -8V, V <sub>GS</sub> = 0V			-1	μA
Drain-source on-state resistance <sup>d,e</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -3.5A		30	45	mΩ
		V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -3A		40	60	
		V <sub>GS</sub> = -1.8V, I <sub>D</sub> = -2.0A		60	90	
Forward transconductance <sup>a</sup>	g <sub>fs</sub>	V <sub>DS</sub> = -5V, I <sub>D</sub> = -4.1A	6			S
<b>Dynamic</b>						
Input capacitance <sup>b,c</sup>	C <sub>iss</sub>	V <sub>DS</sub> = -4V, V <sub>GS</sub> = 0V, f = 1MHz		740		pF
Output capacitance <sup>b,c</sup>	C <sub>oss</sub>			290		
Reverse transfer capacitance <sup>b,c</sup>	C <sub>rss</sub>			190		
Total gate charge <sup>b</sup>	Q <sub>g</sub>	V <sub>DS</sub> = -4V, V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -4.1A		7.8	15	nC
		V <sub>DS</sub> = -4V, V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -4.1A		4.5	9	
Gate-source charge <sup>b</sup>	Q <sub>gs</sub>			1.2		
Gate-drain charge <sup>b</sup>	Q <sub>gd</sub>		1.6			
Gate resistance <sup>b,c</sup>	R <sub>g</sub>	f = 1MHz	1.4	7	14	Ω

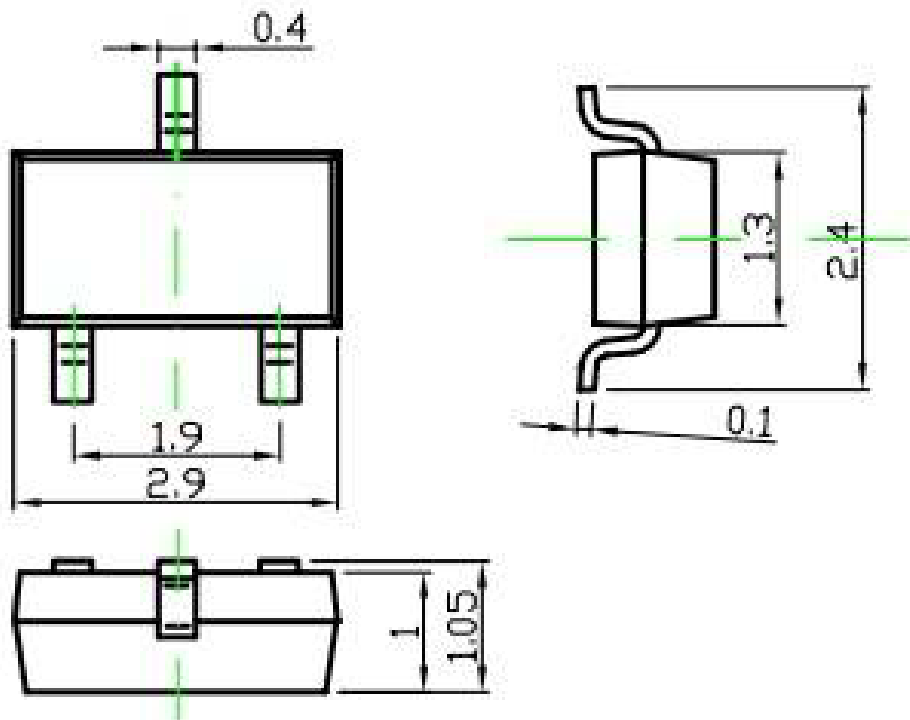
Electrical Characteristics (TA=25°C, unless otherwise noted)

Turn-on delay time <sup>b,c</sup>	t <sub>d(on)</sub>	V <sub>DD</sub> =-4V, R <sub>L</sub> =1.2Ω, I <sub>D</sub> ≈ -3.3A, V <sub>GEN</sub> =-4.5V, R <sub>g</sub> =1Ω		13	20	ns
Rise time <sup>b,c</sup>	t <sub>r</sub>			35	53	
Turn-off Delay time <sup>b,c</sup>	t <sub>d(off)</sub>			32	48	
Fall time <sup>b,c</sup>	t <sub>f</sub>			10	20	
Turn-on delay time <sup>b,c</sup>	t <sub>d(on)</sub>	V <sub>DD</sub> =-4V, R <sub>L</sub> =1.2Ω, I <sub>D</sub> ≈ -3.3A, V <sub>GEN</sub> =-8V, R <sub>g</sub> =1Ω		5	10	
Rise time <sup>b,c</sup>	t <sub>r</sub>			11	17	
Turn-off delay time <sup>b,c</sup>	t <sub>d(off)</sub>			22	33	
Fall time <sup>b,c</sup>	t <sub>f</sub>			16	24	
<b>Drain-source body diode characteristics</b>						
Continuous source-drain diode current	I <sub>S</sub>	T <sub>C</sub> =25°C			-1.4	A
Pulse diode forward current <sup>a</sup>	I <sub>SM</sub>				-10	
Body diode voltage	V <sub>SD</sub>	I <sub>F</sub> =-3.3A			-1.2	V

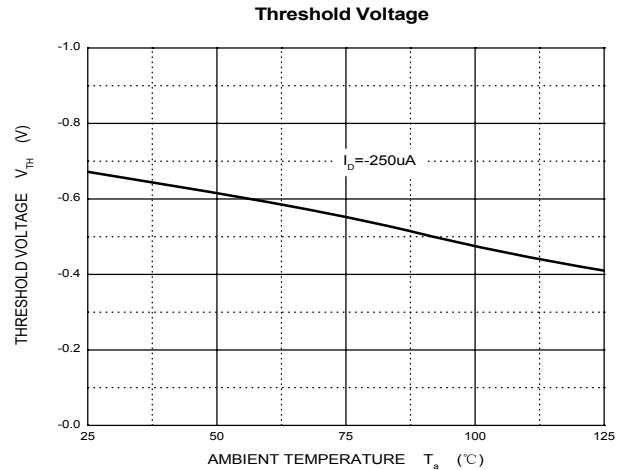
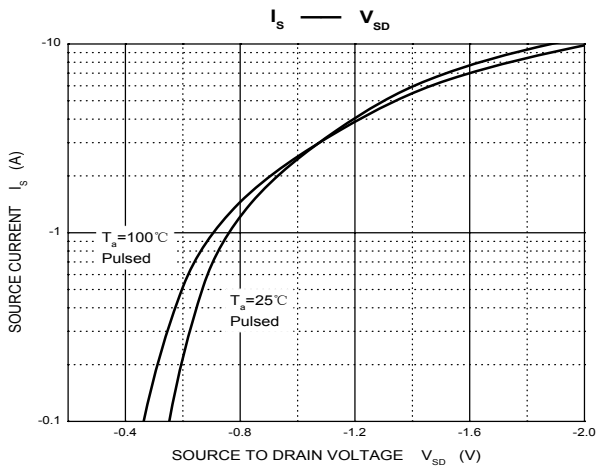
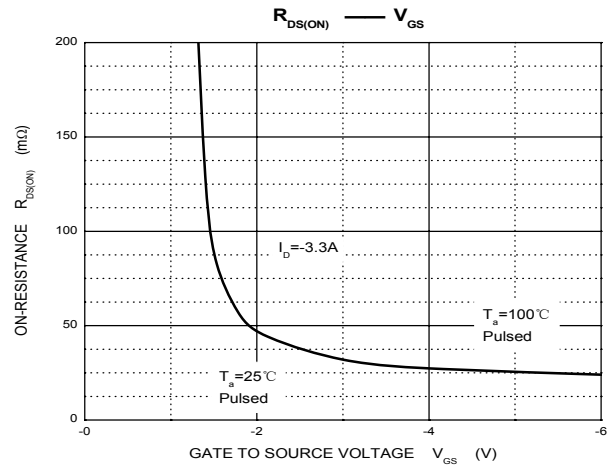
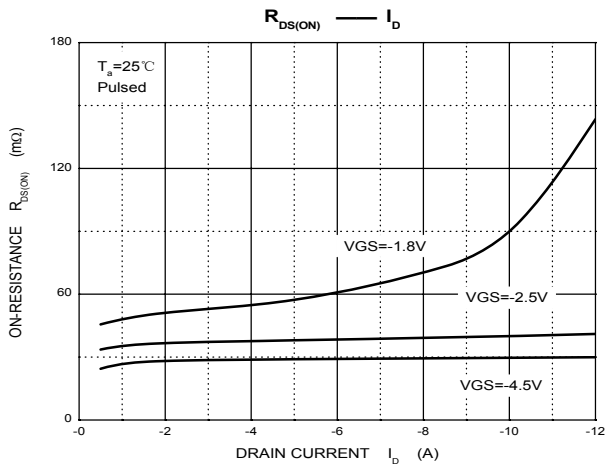
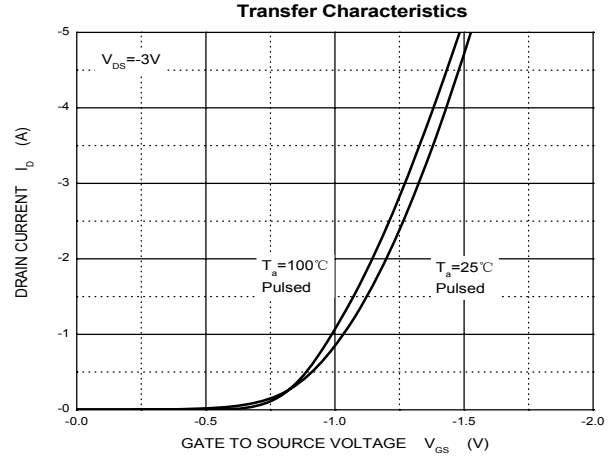
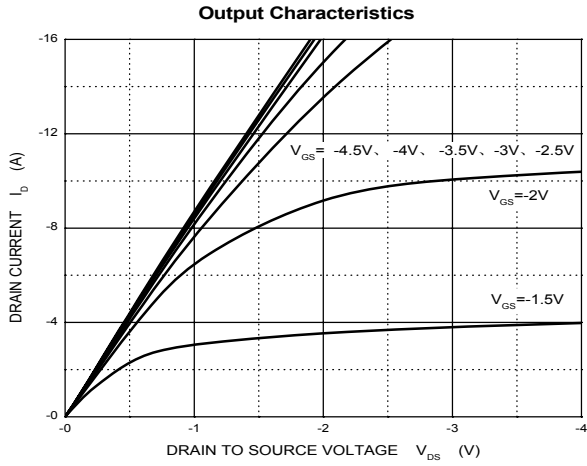
**Note :**

- a. Pulse Test ; Pulse Width ≤300μs, Duty Cycle ≤2%.
- b. Guaranteed by design, not subject to production testing.
- c. These parameters have no way to verify.

# SOT-23



## Typical Characteristics



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [JSMSEMI](#) manufacturer:*

Other Similar products are found below :

[IRFD120](#) [JANTX2N5237](#) [2SK2267\(Q\)](#) [BUK455-60A/B](#) [TK100A10N1,S4X\(S](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#)  
[IRS2092STRPBF-EL](#) [IPS70R2K0CEAKMA1](#) [TK31J60W5,S1VQ\(O](#) [TK31J60W,S1VQ\(O](#) [TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#)  
[DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [P85W28HP2F-7071](#) [DMN1053UCP4-7](#) [NTE2384](#) [DMC2700UDMQ-7](#) [DMN2080UCB4-7](#)  
[DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#)  
[STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#) [DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [IPS60R360PFD7SAKMA1](#)  
[DMN2990UFB-7B](#) [SSM3K35CT,L3F](#) [IPLK60R1K0PFD7ATMA1](#) [2N7002W-G](#) [MCAC30N06Y-TP](#) [IPWS65R035CFD7AXKSA1](#)  
[MCQ7328-TP](#) [SSM3J143TU,LXHF](#) [DMN12M3UCA6-7](#) [PJMF280N65E1\\_T0\\_00201](#) [PJMF380N65E1\\_T0\\_00201](#)  
[PJMF280N60E1\\_T0\\_00201](#) [PJMF600N65E1\\_T0\\_00201](#) [PJMF900N65E1\\_T0\\_00201](#)