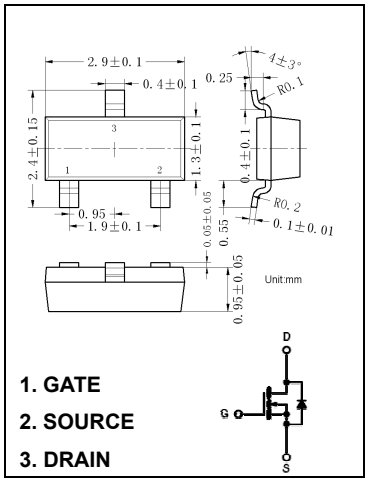
SHENZHEN LONG JING MICRO-ELECTRONICS CO., LTD.

SOT-23 Plastic-Encapsulate MOSFETS

SI2300

N-Channel 20V(D-S) MOSFET



Features

- TrenchFET Power MOSFET

Application

- Load Switch for Portable Devices
- DC/DC Converter

Marking : AOSHB

Maximum Ratings (T_a=25 °C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-source voltage	20	V
V_{GS}	Gate-source voltage	±10	V
I_D	Continuous drain current	2.9	A
I_S	Continuous Source-Drain Current(Diode Conduction)	0.6	
P_D	Power dissipation	0.4	W
T_J	Operating Junction	150	°C
T_{stg}	Storage temperature	-55 to 150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient (t≤5s)	312.5	°C /W

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

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
Static						
$V_{(BR)DSS}$	Drain- source breakdown voltage	V_{GS} = 0 V, I_D = 10uA	20			V
$V_{GS(th)}$	Gate threshold voltage	V_{GS}=V_{DS}, I_D = 50uA	0.50	0.95	1.2	
I_{DSS}	Zero gate voltage drain current	V_{DS} = 20 V, V_{GS} = 0 V			1	μA
I_{GSS}	Gate-body leakage current	V_{GS} = ±10 V, V_{DS} = 0 V			±100	nA
$R_{DS(on)}$	Drain-Source on-state resistance[a]	V_{GS} = 4.5 V, I_D = 2.9 A		33	45	mΩ
		V_{GS} = 2.5 V, I_D = 2.5A		37	59	
g_{fs}	Forward transconductance[a]	V_{DS}≥ 5V ,I_D = 2.9A		8		S
V_{SD}	Diode forward voltage	V_{GS} = 0 V, I_S = 0.94 A		0.76	1.2	V
Dynamic						
C_{iss}	Input capacitance[b]	V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz		300		pF
C_{oss}	Output capacitance[b]			120		
C_{rss}	Reverse transfer capacitance[b]			80		

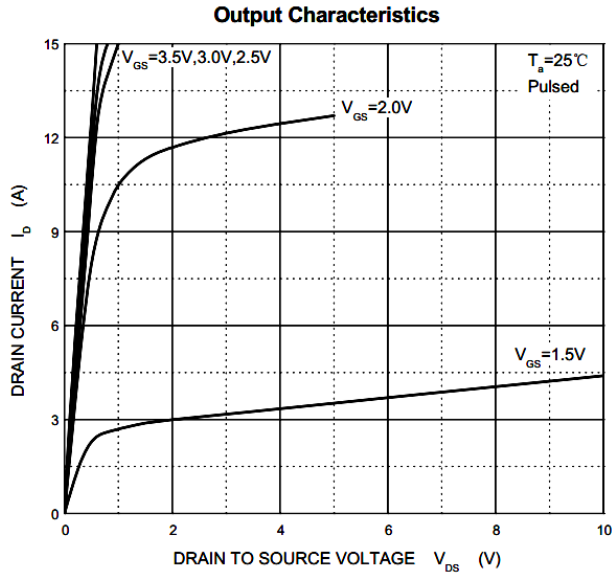
Q_g	Total gate charge	V_{DS} =10V,V_{GS}=4.5V, I_D =3.6A		4.0	10	nC
Q_{gs}	Gate-source charge			0.65		
Q_{gd}	Gate-drain charge			1.5		
Switching[b]						
$t_{d(on)}$	Turn-on delay time	V_{DD}=10V, R_L=5.5Ω, I_D≈3.6A, V_{GEN}=4.5V,Rg=6Ω		7	15	ns
t_r	Rise time			55	80	
$t_{d(off)}$	Turn-off delay time			16	60	
t_f	Fall time			10	25	

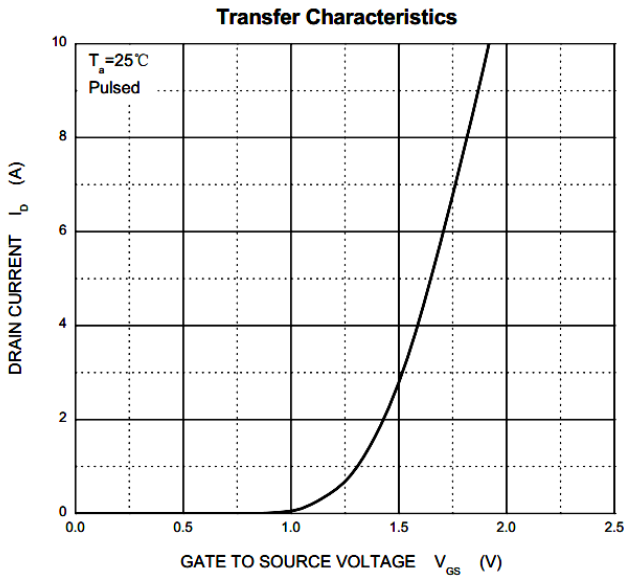
Notes :

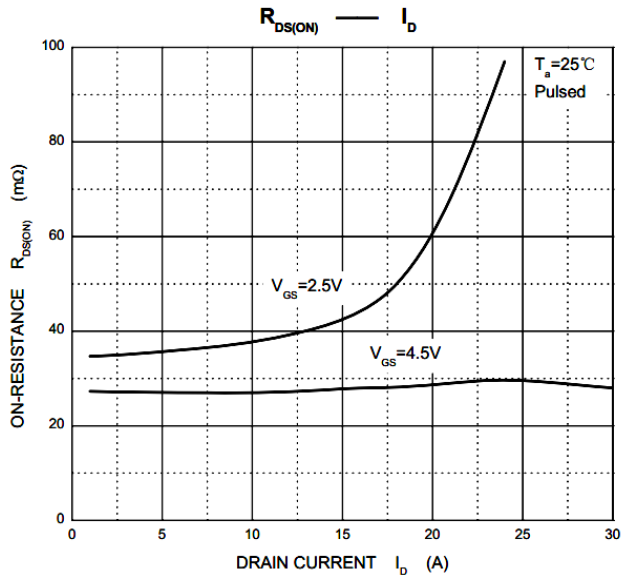
a. Pulse Test : Pulse width≤300μs, duty cycle ≤2%.

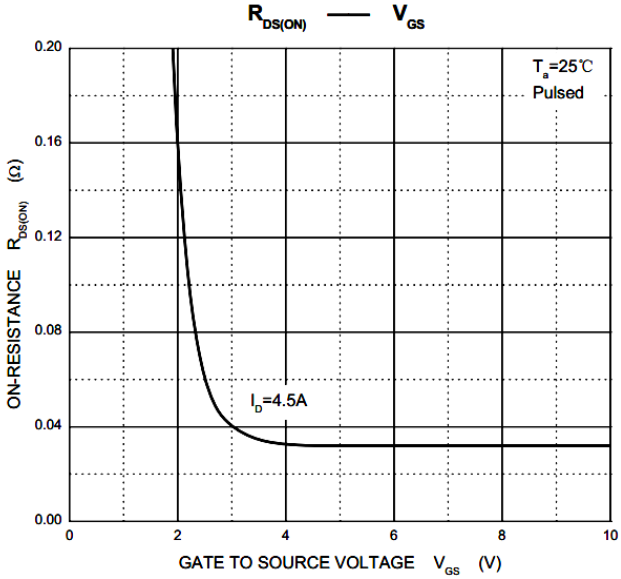
b. These parameters have no way to verify.

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 ALJ ***manufacturer:***

Other Similar products are found below :

IRFD120 IRFY240C JANTX2N5237 2SK2267(Q) BUK455-60A/B MIC4420CM-TR VN1206L NDP4060 SI4482DY IPS70R2K0CEAKMA1 SQD23N06-31L-GE3 TK16J60W,S1VQ(O 2SK2614(TE16L1,Q) DMN1017UCP3-7 EFC2J004NUZTDG DMN1053UCP4-7 SQJ469EP-T1-GE3 NTE2384 DMC2700UDMQ-7 DMN2080UCB4-7 DMN61D9UWQ-13 US6M2GTR DMN31D5UDJ-7 DMP22D4UFO-7B DMN1006UCA6-7 DMN16M9UCA6-7 STF5N65M6 IRF40H233XTMA1 STU5N65M6 DMN6022SSD-13 DMN13M9UCA6-7 DMTH10H4M6SPS-13 DMN2990UFB-7B IPB80P04P405ATMA2 2N7002W-G MCAC30N06Y-TP MCQ7328-TP NTMC083NP10M5L NVMFS2D3P04M8LT1G BXP7N65D BXP4N65F AOL1454G WMJ80N60C4 BXP2N20L BXP2N65D BXT1150N10J BXT1700P06M TSM60NB380CP ROG RQ7L055BGTCR DMNH15H110SK3-13