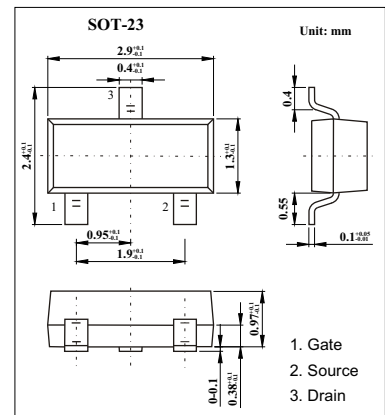
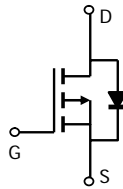


**Features**

$V_{DS}=-30V$ ,  $r_{DS(on)}=0.080$  ,  $V_{GS}=-10V$ ,  $I_D=-3A$

$V_{DS}=-30V$ ,  $r_{DS(on)}=0.140$  ,  $V_{GS}=-4.5V$ ,  $I_D=-2.5A$



**Absolute Maximum Ratings  $T_a = 25$**

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	-3 -2.5	A
	$T_A=25$ $T_A=70$		
Pulsed Drain Current *	$I_{DM}$	-12	A
Power Dissipation	$P_D$	1.25 0.8	W
	$T_A=25$ $T_A=70$		
Maximum Junction-to-Ambient *	$R_{thJA}$	130	/W
Jumction Temperature,Storage Temperature	$T_j, T_{stg}$	-55 to 150	

\* . Pulse width limited by maximum junction temperature

Electrical Characteristics Ta = 25

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	V <sub>GS</sub> = 0 V, I <sub>D</sub> = -10 μA	-30			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = -24 V, V <sub>GS</sub> = 0 V			-1	μA
		V <sub>DS</sub> = -24 V, V <sub>GS</sub> = 0 V, T <sub>J</sub> = 55			-10	
Gate-Body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±20 V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250 μA	-1.0			V
Drain-Source On-State Resistance *	r <sub>DS(on)</sub>	V <sub>GS</sub> = -10 V, I <sub>D</sub> = -3 A		0.064	0.080	
		V <sub>GS</sub> = -4.5 V, I <sub>D</sub> = -2.5 A		0.103	0.140	
On-State Drain Current	I <sub>D(on)</sub>	V <sub>DS</sub> = -5 V, V <sub>GS</sub> = -10 V	-6			A
Forward Transconductance *	g <sub>fs</sub>	V <sub>DS</sub> = -10 V, I <sub>D</sub> = -3 A		4.5		S
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = -15 V, V <sub>GS</sub> = 0, f = 1 MHz		565		pF
Output Capacitance	C <sub>oss</sub>			126		
Reverse Transfer Capacitance	C <sub>rss</sub>			75		
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> = -15V, V <sub>GS</sub> = -10 V, I <sub>D</sub> = -3A		10	15	nC
Gate-Source Charge	Q <sub>gs</sub>			1.9		
Gate-Drain Charge	Q <sub>gd</sub>			2		
Turn-On Time	t <sub>d(on)</sub>	V <sub>DD</sub> = -15V, R <sub>L</sub> = 15Ω, I <sub>D</sub> = -1A, V <sub>GEN</sub> = -10V, R <sub>G</sub> = 6Ω		10	20	ns
	t <sub>r</sub>			9	20	
Turn-Off Time	t <sub>d(off)</sub>			27	50	
	t <sub>f</sub>			7	16	
Continuous Source Current (diode conduction)	I <sub>S</sub>			-1.25		
Diode Forward Voltage *	V <sub>SD</sub>	I <sub>S</sub> = -1.25 A, V <sub>GS</sub> = 0 V			-1.2	V

\* Pulse test: PW 300μs duty cycle 2%.

■ Marking

Marking	A7SHB
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