

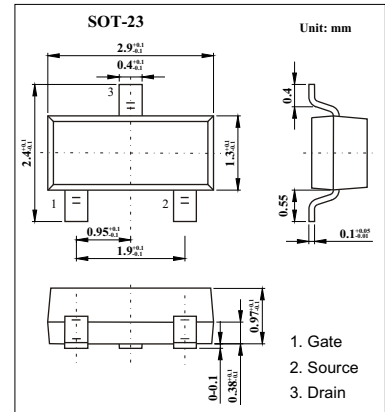
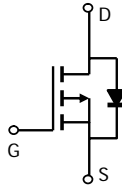
P-Channel 30-V (D-S) MOSFET

SI2307

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}	± 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
Junction Temperature, Storage Temperature	$T_{j, Tstg}$	-55 to 150	

* . Pulse width limited by maximum junction temperature



炬芯微
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SMD Type

MOSFET

SI2307

Electrical Characteristics Ta = 25

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

* Pulse test: PW 300μs duty cycle 2%.

■ Marking

Marking	A7SHB
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