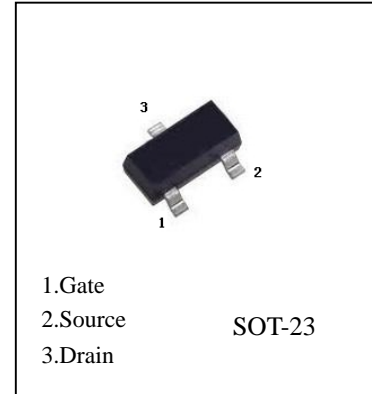


FEATURES

- Lower on-resistance
- Reliable and Rugged

HOA2307
P-Channel MOSFET


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

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-source Voltage	V _{GS}	±20	V
Drain Current (Continuous) ^a	I _D	-2.7	A
Total Power Dissipation @TA=25°C ^b	P _D	1.1	W
Operating Junction and Storage Temperature Range	T _j , T _{stg}	-55 to +150	°C
Thermal Resistance Junction to Ambient (PCB mounted)	R _{JA}	114	°C/W

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1		-3	
Gate-Source Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1	μA
		V _{DS} = -30V, V _{GS} = 0V, T _J = 55°C			-10	
Drain-Source On-State Resistance ^c	R _{DS(on)}	V _{GS} = -4.5V, I _D = -2.5A		0.110	0.138	Ω
		V _{GS} = -10V, I _D = -3.5A		0.073	0.088	
Forward Transconductance ^c	g _{fs}	V _{DS} = -10V, I _D = -3.5A		7		S
Dynamic^d						
Input Capacitance	C _{iss}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		340		pF
Output Capacitance	C _{oss}			67		
Reverse Transfer Capacitance	C _{rss}			51		
Total Gate Charge	Q _g	V _{DS} = -15V, V _{GS} = -4.5V, I _D = -2.5A		4.1	6.2	nC
Gate-Source Charge	Q _{gs}			1.3		
Gate-Drain Charge	Q _{gd}			1.8		
Gate Resistance	R _g	f = 1MHz		10		Ω

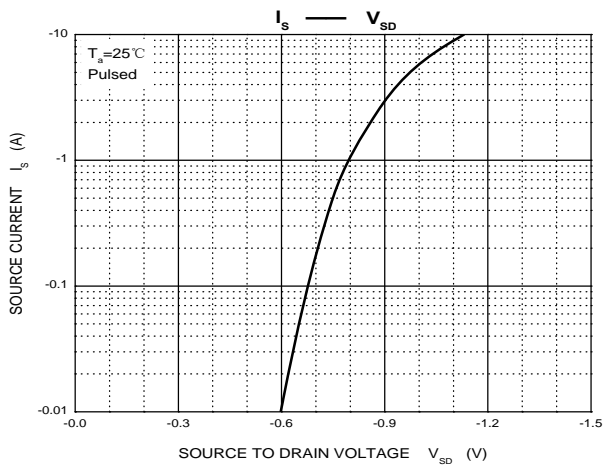
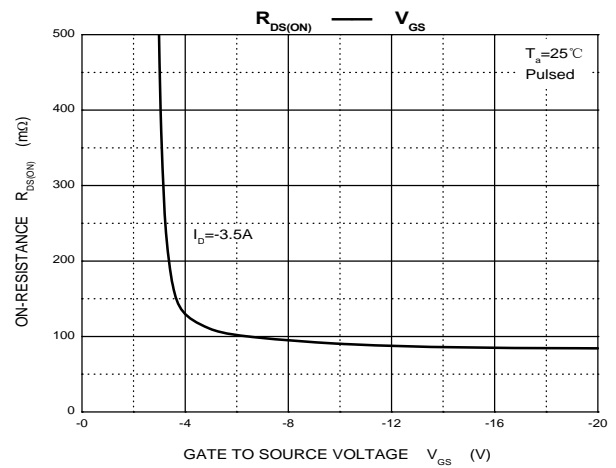
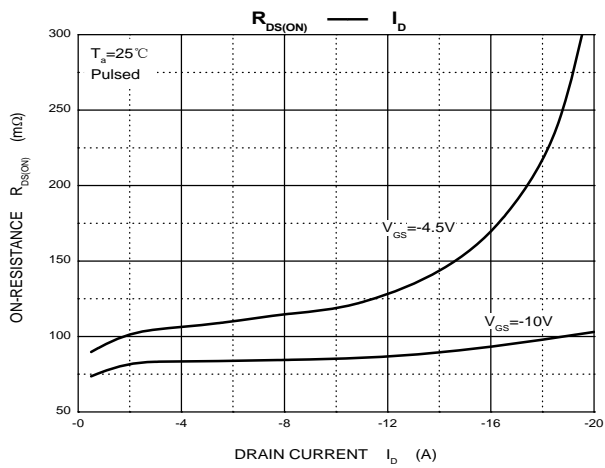
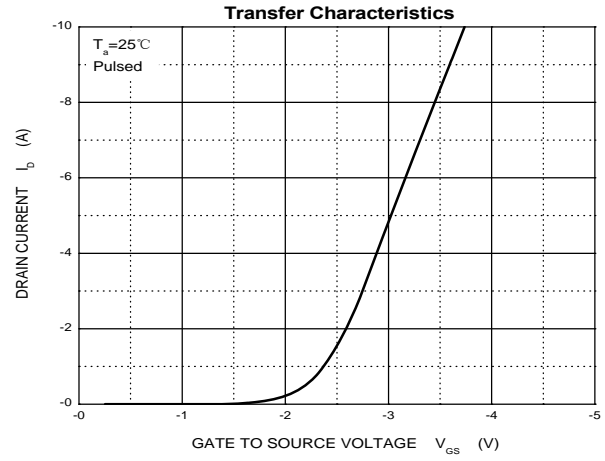
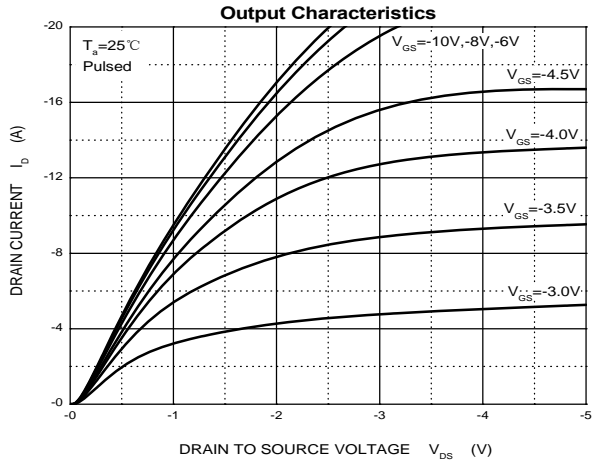
HOA2307

Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-15V,$ $R_L=15\Omega, I_D =-1A,$ $V_{GEN}=-4.5V, R_g=1\Omega$		40	60	ns
Rise Time	t_r			40	60	
Turn-Off Delay Time	$t_{d(off)}$			20	40	
Fall Time	t_f			17	30	
Drain-source Body diode characteristics						
Body Diode Voltage	V_{SD}	$I_S=-0.75A, V_{GS}=0$		-0.8	-1.2	V

Notes:

- a. $t=5s$.
- b. Surface mounted on 1" ×1" FR4 board.
- c. Pulse Test : Pulse Width < 300 μ s, Duty Cycle \leq 2%.
- d. Guaranteed by design, not subject to production testing.

HOA2307 Typical Characteristics



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