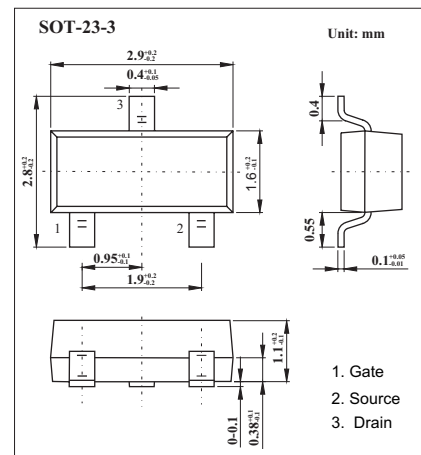
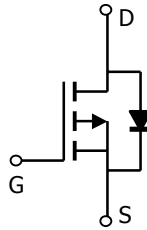


P-Channel MOSFET

KI2305

■ Features

- $V_{DS} (V) = -20V$
- $R_{DS(ON)} < 0.065 \Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 0.100 \Omega$ ($V_{GS} = -2.5V$)
- $R_{DS(ON)} < 0.250 \Omega$ ($V_{GS} = -1.8V$)



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	± 12	V
Continuous drain current	I_D	$T_A=25^\circ C$ -4.2 $T_A=70^\circ C$ -3.4	A
Pulsed drain current	I_{DM}	-10	A
Power dissipation	P_D	$T_A=25^\circ C$ 1.38 $T_A=70^\circ C$ 0.8	W
Thermal Resistance.Junction-to-Ambient	$R_{\theta JA}$	90	$^\circ C/W$
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ C$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-source breakdown voltage	V _{DSS}	V _{GS} = 0 V, I _D = -10 μA	-20			V
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.5			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -20 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -16 V, V _{GS} = 0 V, T _J = 55 °C			-10	
Gate-body leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±12 V			±100	nA
Drain-source on-state resistance	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -4.2 A			0.065	Ω
		V _{GS} = -2.5 V, I _D = -2.0 A			0.100	
		V _{GS} = -1.8 V, I _D = -1.0 A			0.250	
On-state drain current	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -4.5 V	-6			A
		V _{DS} ≤ -5 V, V _{GS} = -2.5 V	-3			
Forward transconductance	g _{fs}	V _{DS} = -5 V, I _D = -2.8 A		9		S
Input capacitance *	C _{iss}	V _{DS} = -15V, V _{GS} = 0, f = 1 MHz		740		pF
Output capacitance *	C _{oss}			167		
Reverse transfer capacitance *	C _{rss}			126		
Total gate charge *	Q _g	V _{DS} = -16V, V _{GS} = -4.5 V, I _D = -4.2 A		10.6		nC
Gate-source charge *	Q _{gs}			2.32		
Gate-drain charge *	Q _{gd}			3.68		
Turn-on Delay time	t _{d(on)}	V _{DD} = -15V, R _L = 3.6Ω, I _D = -4.2A, V _{GEN} = -10V, R _G = 6Ω		5.9		ns
Turn-on Rise time	t _r			3.6		
Turn-off Dealy time	t _{d(off)}			32.4		
Turn-off Fall time	t _f			2.6		
Continuous source current (diode conduction) *	I _S			-1.6		A
Diode forward voltage	V _{SD}	I _S = -1.2 A, V _{GS} = 0 V			-1.2	V

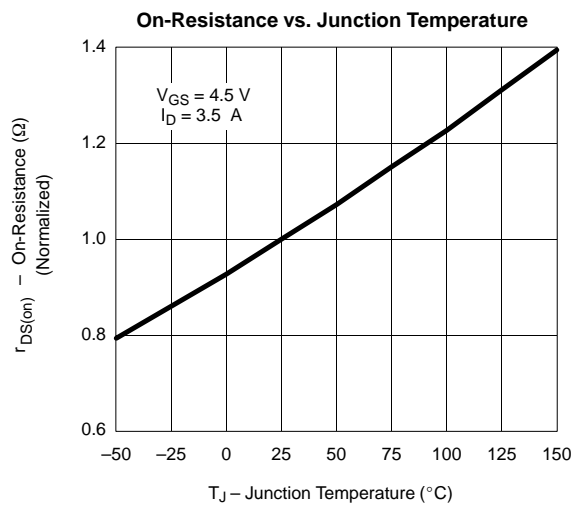
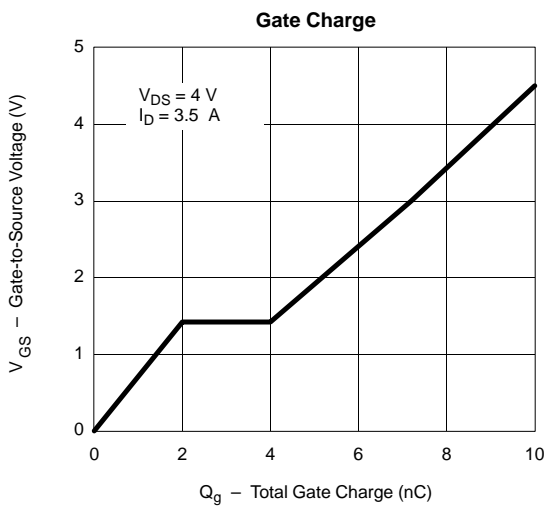
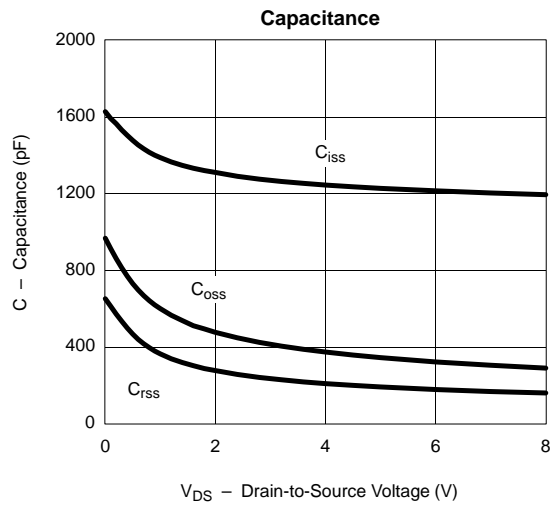
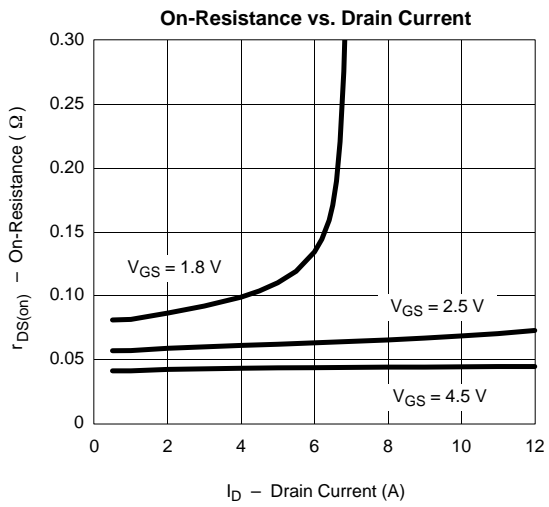
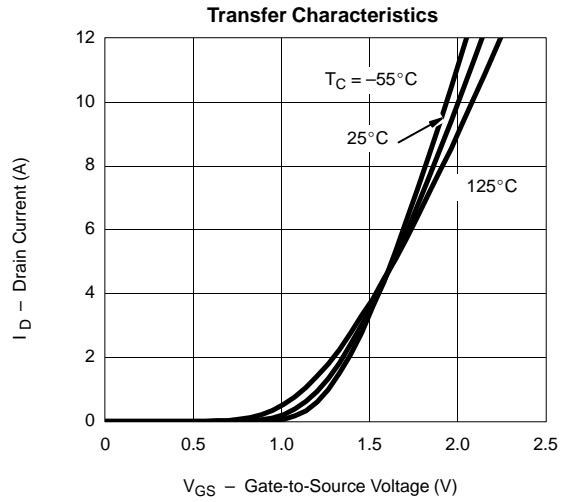
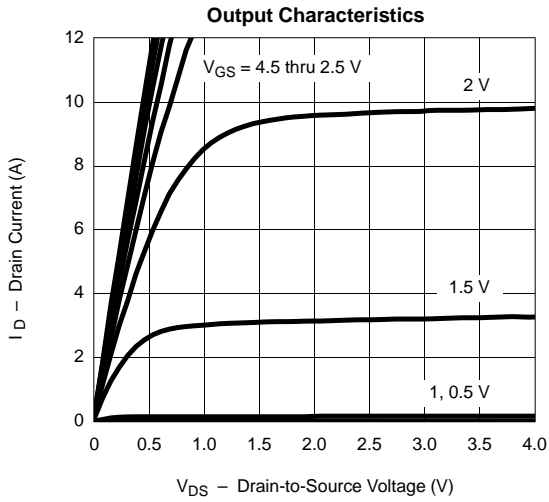
* Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

■ Marking

Marking	A5SHB
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KI2305

Typical Characteristics



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