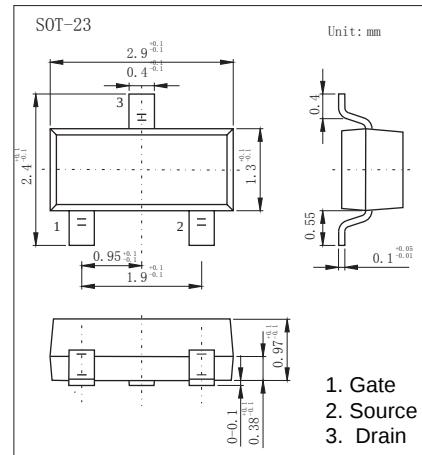
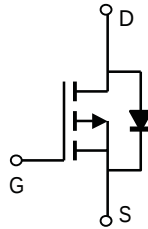


P-Channel MOSFET RC2305A

■ Features

- $V_{DS} (V) = -20V$
- $R_{DS(ON)} < 0.045 \Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 0.060 \Omega$ ($V_{GS} = -2.5V$)



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

Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	± 10	V
Continuous drain current $T_A = 25^\circ C$ $T_A = 70^\circ C$	I_D	-4.2 -2.8	A
Pulsed drain current	I_{DM}	-12	A
Power dissipation $T_A = 25^\circ C$ $T_A = 70^\circ C$	P_D	1.25 0.8	W
Thermal Resistance..Junction-to-Ambient	$R_{\theta JA}$	130	$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{stg}	-55 to +150	$^\circ C$

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■ Electrical Characteristics Ta = 25℃

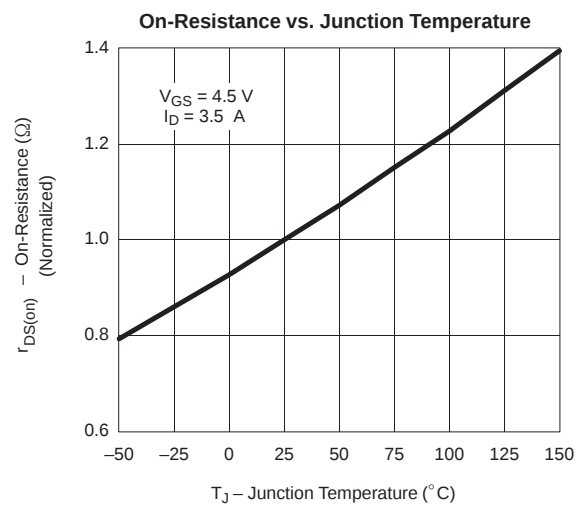
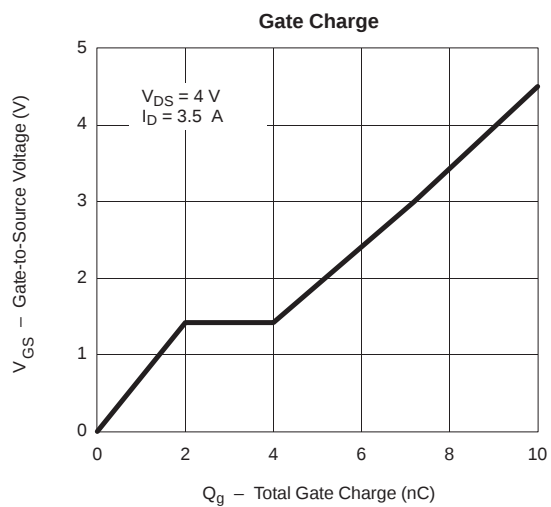
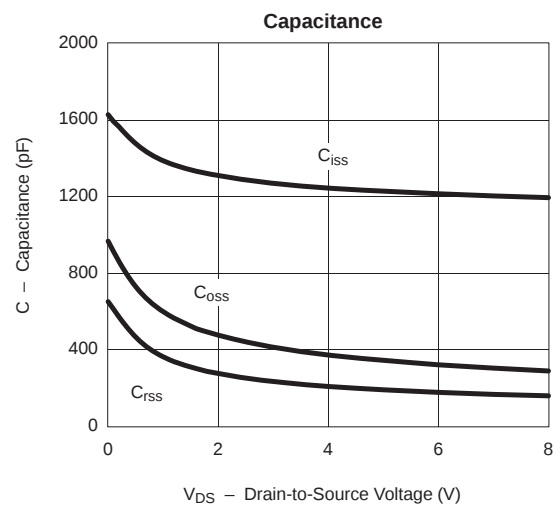
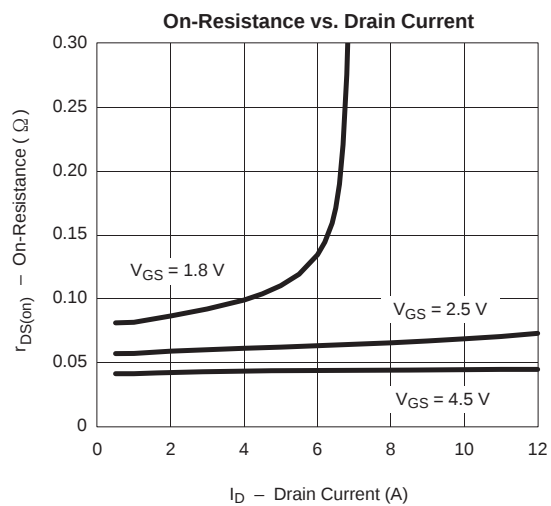
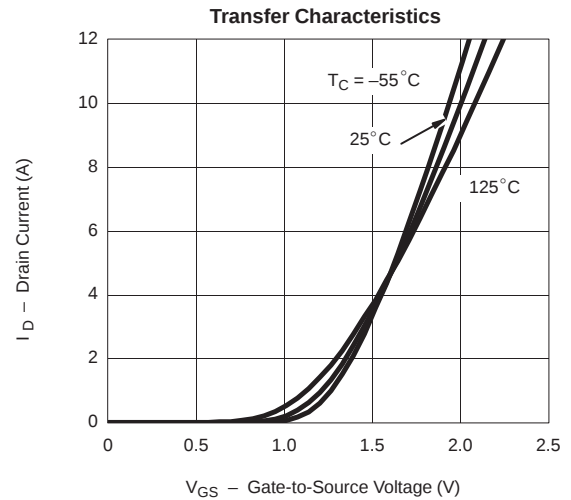
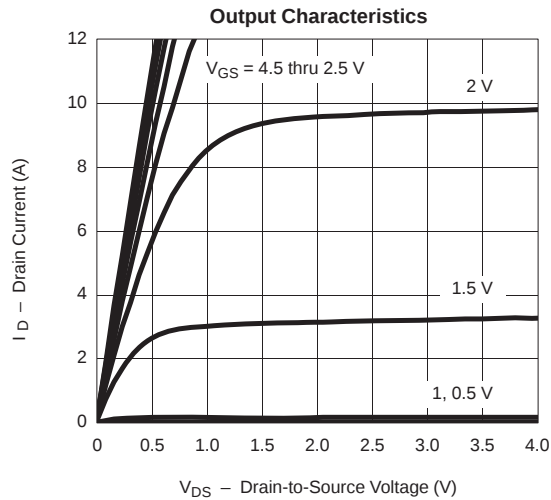
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	V _{DSS}	V _{GS} = 0 V, I _D = -250μA	-20			V
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.4		-1.0	V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -20 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -20V, V _{GS} = 0 V, T _J = 55 ℃			-10	
Gate-body leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±10 V			±100	nA
Drain-source on-state resistance	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -3.5 A		0.030	0.045	Ω
		V _{GS} = -2.5 V, I _D = -3.0 A		0.050	0.060	
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 = -3.5 A		8.5		S
Input capacitance *	C _{iss}	V _{DS} = -10V, V _{GS} = 0, f = 1 MHz		1245		pF
Output capacitance *	C _{oss}			375		
Reverse transfer capacitance *	C _{rss}			210		
Total gate charge *	Q _g	V _{DS} = -10V, V _{GS} = -4.5 V, I _D = -3.5 A		10	15	nC
Gate-source charge *	Q _{gs}			2		
Gate-drain charge *	Q _{gd}			2		
Turn-on Delay time	t _{d(on)}	= 4Ω, V _{DD} = -5V, R _L = -4.5V, R _G = 6Ω I _D = -1A, V _{GEN}		13	20	ns
Turn-on Rise time	t _r			25	40	
Turn-off Dealy time	t _{d(off)}			55	80	
Turn-off Fall time	t _f			19	35	
Continuous source current (diode conduction) *	I _S			-1.6		A
Diode forward voltage	V _{SD}	I _S = -1.6 A, V _{GS} = 0 V			-1.2	V

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

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Typical Characteristics



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■ Typical Characteristics

