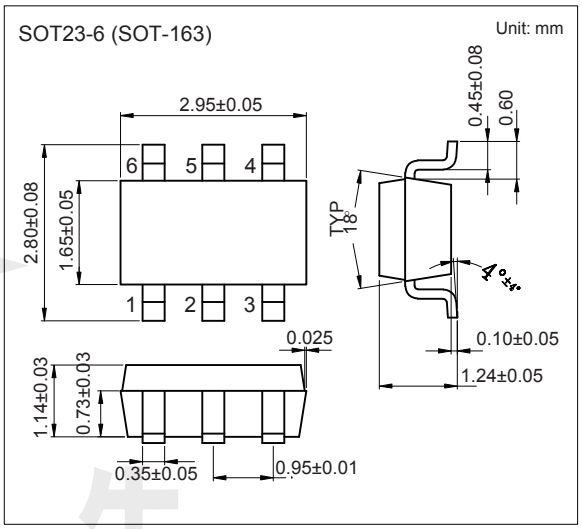
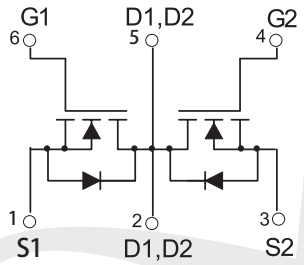
Dual N-Channel MOSFET
XJ8205S



■ Features

- $V_{DS\ (V)}$ = 20V
- I_D = 6 A (V_{GS} = 10V)
- $R_{DS(ON)}$ < 25mΩ (V_{GS} = 4.5V)
- $R_{DS(ON)}$ < 32mΩ (V_{GS} = 2.5V)
- Battery Protection
- Load Switch
- Power Management



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	
Continuous Drain Current	I_D	6	A
Pulsed Drain Current	I_{DM}	25	
Power Dissipation	P_D	350	mW
Thermal Resistance.Junction- to-Ambient	R_{thJA}	357	℃/W
Lead Temperature for Soldering Purposes (1/8'' from case for 10 s)	T_L	260	℃
Junction Temperature	T_J	150	
Storage Temperature	T_{STG}	-55 to 150	

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=250μA, V_{GS}=0V	20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=18V, V_{GS}=0V			1	μA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}=±12V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	0.5		0.9	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=4.5V, I_D=6A			25	mΩ
		V_{GS}=2.5V, I_D=5A			32	
Forward Transconductance	g_{FS}	V_{DS}=5V, I_D=4.5A		10		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=8V, f=1MHz		800		pF
Output Capacitance	C_{oss}			155		
Reverse Transfer Capacitance	C_{rss}			125		
Total Gate Charge	Q_g	V_{DS} =10V,V_{GS} =4.5V,I_D=4A		11		nC
Gate Source Charge	Q_{gs}			2.3		
Gate Drain Charge	Q_{gd}			2.5		
Turn-On DelayTime	$t_{d(on)}$	V_{DD}=10V,V_{GS}=4V, I_D=1A,R_{GEN}=10Ω		18		ns
Turn-On Rise Time	t_r			5		
Turn-Off DelayTime	$t_{d(off)}$			43		
Turn-Off Fall Time	t_f			20		
Diode Forward Voltage	V_{SD}	I_S=1.25A,V_{GS}=0V			1.2	V

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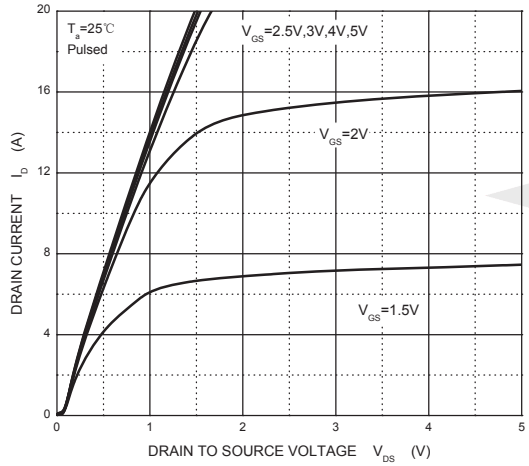
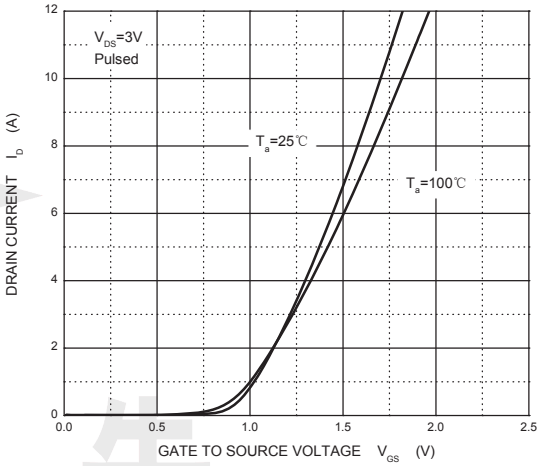
■ Typical Characterisitics

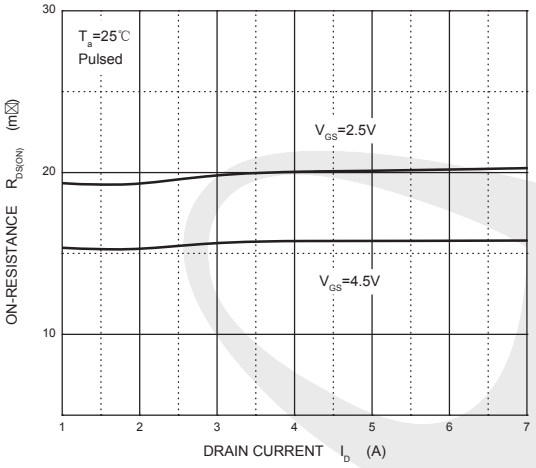
Output Characteristics



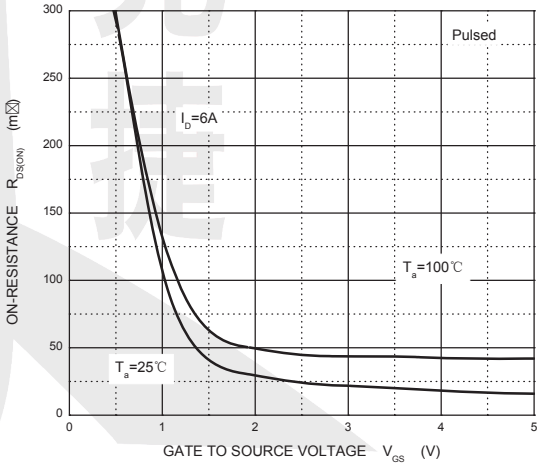
Transfer Characteristics



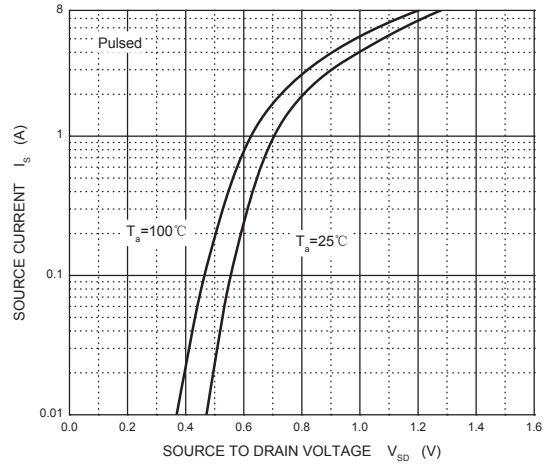
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage