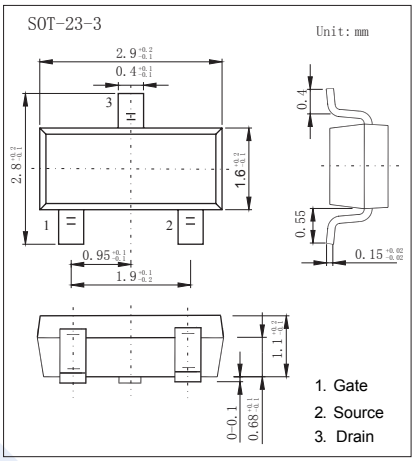
P-Channel MOSFET

2KJ6021



■ Features

- $V_{DS\ (V)}$ =-60V
- I_D =-3.5 A (V_{GS} =-10V)
- $R_{DS(ON)}$ < 100 mΩ (V_{GS} =-10V)
- $R_{DS(ON)}$ < 120 mΩ (V_{GS} =-4.5V)

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-60	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current	Ta = 25℃	I_D	-3.5	A
	Ta = 100℃		-2.2	
Pulsed Drain Current	(Note.1)	I_{DM}	-20	
Power Dissipation		P_D	1.25	W
Thermal Resistance.Junction- to-Ambient	(Note.2)	R_{thJA}	100	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	-55 to 150	

Note.1:Pulse Width ≤300μs, Duty Cycle≤2%

Note.2:1.Surface mounted on 1 in² copper pad of FR-4 board. 156/W when mounted on minimum copper pad.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=-250μA, V_{GS}=0V	-60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-48V, V_{GS}=0V			1	uA
		V_{DS}=-48V, V_{GS}=0V, T_J=70℃			25	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-1		-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V, I_D=-3A			100	mΩ
		V_{GS}=-4.5V, I_D=-2.7A			120	
Forward Transconductance	g_{FS}	V_{DS}=-5V, I_D=-3A		5.8		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=-30V, f=1MHz		929		pF
Output Capacitance	C_{oss}			48		
Reverse Transfer Capacitance	C_{rss}			33		
Total Gate Charge	Q_g	V_{GS}=-10V, V_{DS}=-30V, I_D=-3.5A		14		nC
Gate Source Charge	Q_{gs}			3		
Gate Drain Charge	Q_{gd}			3.4		
Turn-On DelayTime	$t_{d(on)}$	V_{GS}=-10V, V_{DS}=-30V, I_D=-1A,R_G=6Ω		10		ns
Turn-On Rise Time	t_r			22		
Turn-Off DelayTime	$t_{d(off)}$			27		
Turn-Off Fall Time	t_f			14		
Body Diode Reverse Recovery Time	t_{rr}	I_F=-2A, V_{GS}=0V, dI/dt=100A/μs		12		
Body Diode Reverse Recovery Charge	Q_{rr}			7		nC
Maximum Body-Diode Continuous Current	I_S				-3.5	A
Body-Diode Pulsed Current	I_{SM}				-20	
Diode Forward Voltage	V_{SD}	I_S=-2A,V_{GS}=0V			-1.2	V

Note:Pulse Test : Pulse Width ≤300μs, Duty Cycle≤2%

■ Marking

Marking	JAM

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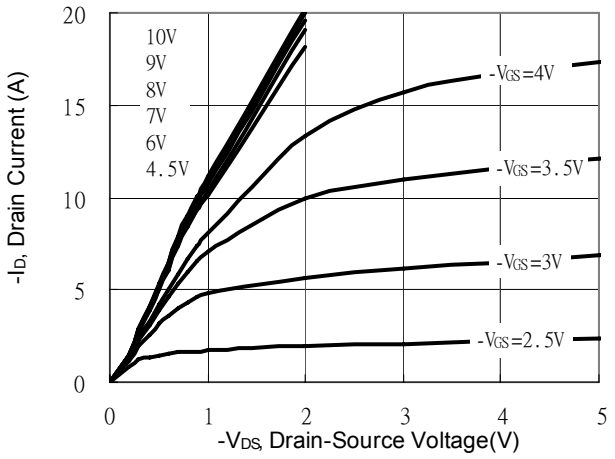
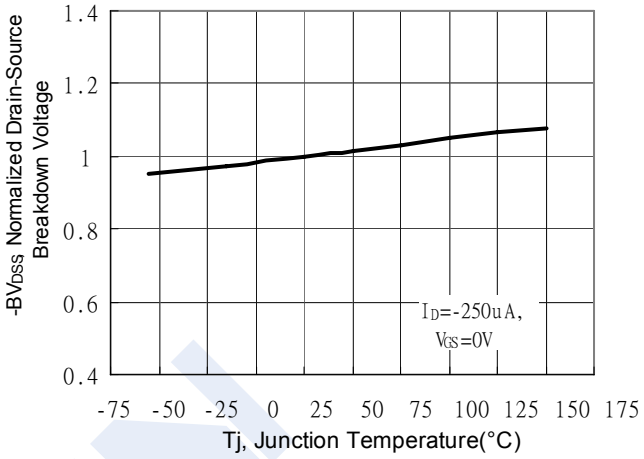
■ Typical Characterisitics

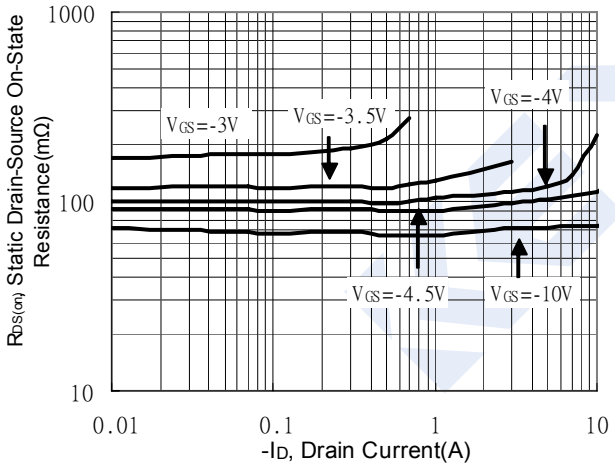
Typical Output Characteristics



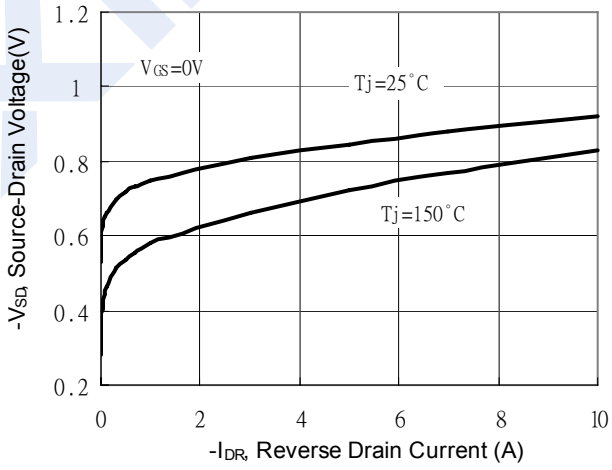
Brekdown Voltage vs Ambient Temperature



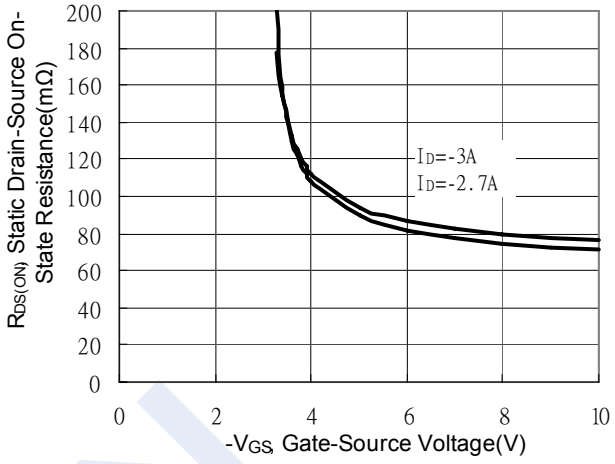
Static Drain-Source On-State resistance vs Drain Current



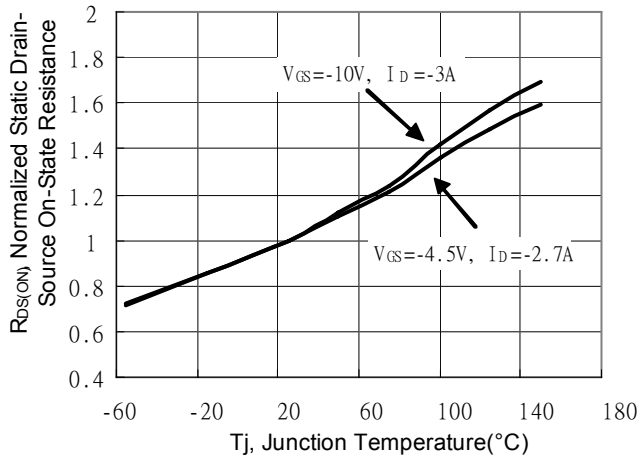
Reverse Drain Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage



Drain-Source On-State Resistance vs Junction Tempearture



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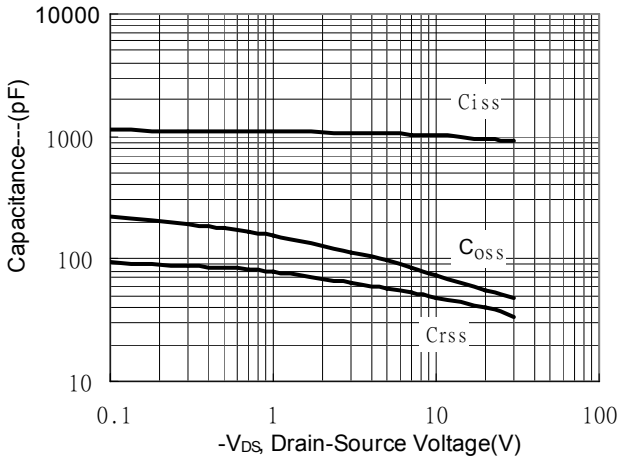
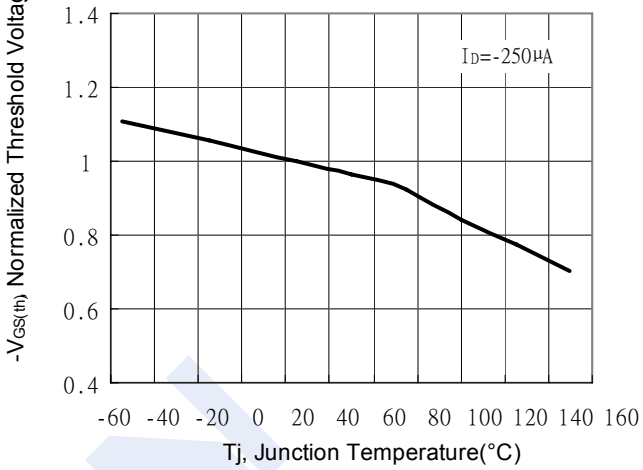
■ Typical Characterisitics

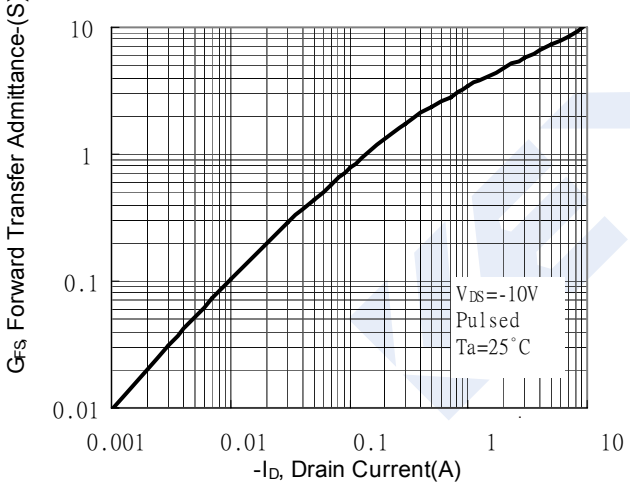
Capacitance vs Drain-to-Source Voltage



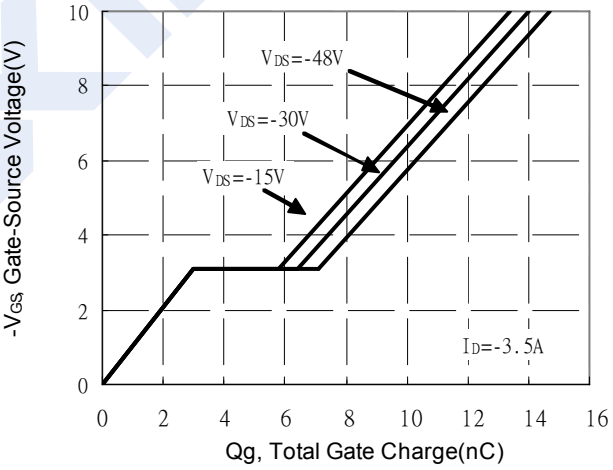
Threshold Voltage vs Junction Tempearture



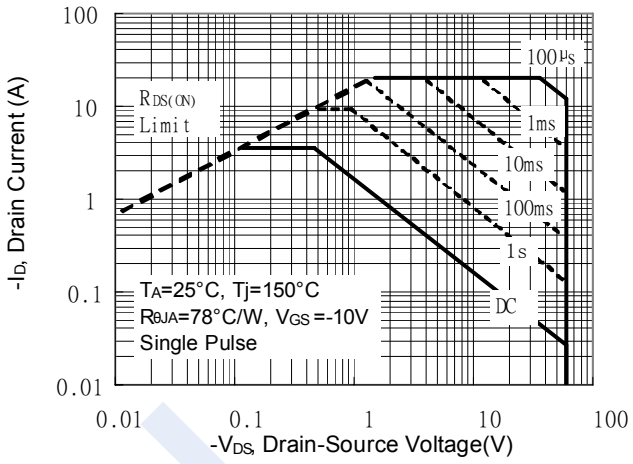
Forward Transfer Admittance vs Drain Current



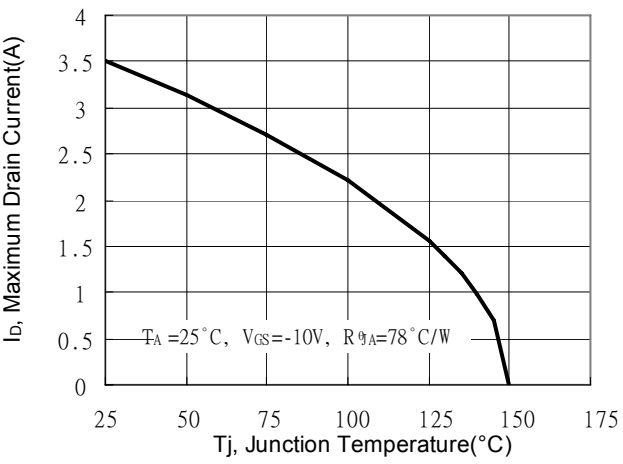
Gate Charge Characteristics



Maximum Safe Operating Area



Maximum Drain Current vs JunctionTemperature



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■ Typical Characterisitics