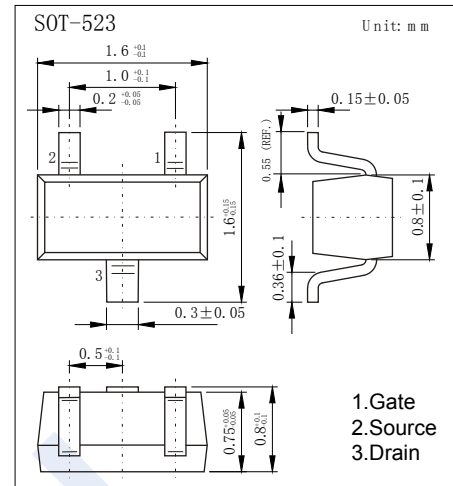
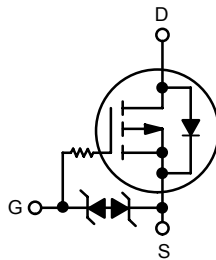


## P-Channel MOSFET

### 2KJ6022

#### ■ Features

- $V_{DS} (V) = -20V$
- $I_D = -760m A (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 260m \Omega (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 350m \Omega (V_{GS} = -2.5V)$
- $R_{DS(ON)} < 490m \Omega (V_{GS} = -1.8V)$



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GS}$	$\pm 6$	
Gate-to-Source ESD Rating - (Human Body Model, Method 3015)	ESD	1.8	KV
Continuous Drain Current	$I_D$	-0.76	A
Pulsed Drain Current @ $t_p = 10 \mu s$	$I_{DM}$	-1	
Power Dissipation	$P_D$	301	mW
Thermal Resistance Junction- to-Ambient	$R_{thJA}$	415	$^\circ C/W$
Lead Temperature for Soldering Purposes (1/8 in from case for 10 s)	$T_L$	260	$^\circ C$
Junction Temperature	$T_J$	150	
Junction Storage Temperature Range	$T_{stg}$	-55 to 150	

## P-Channel MOSFET

### 2KJ6022

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =-250 μ A, V <sub>GS</sub> =0V	-20			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-16V, V <sub>GS</sub> =0V			-100	nA
Gate-Body leakage current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±4.5V			±10	μA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =-250 μ A	-0.45		-1.2	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-350mA (Note.1)		260	360	mΩ
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-300mA (Note.1)		350	450	
		V <sub>GS</sub> =-1.8V, I <sub>D</sub> =-150mA (Note.1)		490	1000	
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-250mA (Note.1)		0.4		S
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-5V, f=1MHz		156		pF
Output Capacitance	C <sub>oss</sub>			28		
Reverse Transfer Capacitance	C <sub>rss</sub>			18		
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-4.5V, V <sub>DS</sub> =-10V, I <sub>D</sub> =-0.3A		2.1		nC
Threshold Gate Charge	Q <sub>gth</sub>			0.125		
Gate Source Charge	Q <sub>gs</sub>			0.325		
Gate Drain Charge	Q <sub>gd</sub>			0.5		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>GS</sub> =-4.5V, V <sub>DS</sub> =-10V, I <sub>D</sub> =-200mA, R <sub>G</sub> =10Ω		8		ns
Turn-On Rise Time	t <sub>r</sub>			8.2		
Turn-Off DelayTime	t <sub>d(off)</sub>			29		
Turn-Off Fall Time	t <sub>f</sub>			20.4		
Maximum Body-Diode Continuous Current	I <sub>S</sub>				-250	mA
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-250mA, V <sub>GS</sub> =0V			-1.1	V

Note.1: Pulse Test: pulse width ≤ 300us, duty cycle ≤ 2%.

#### ■ Marking

Marking	** M
---------	------

## P-Channel MOSFET 2KJ6022

■ Typical Characteristics

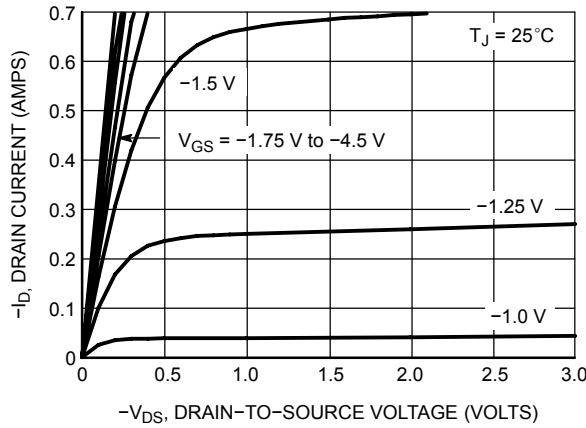


Figure 1. On-Region Characteristics

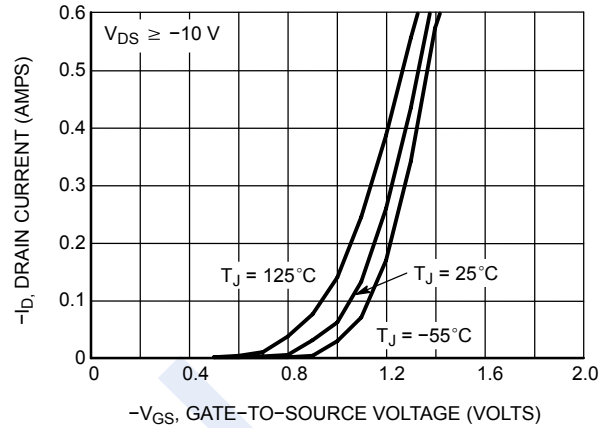


Figure 2. Transfer Characteristics

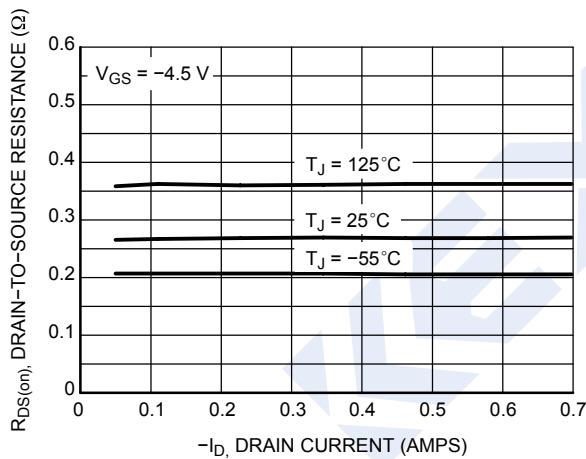


Figure 3. On-Resistance vs. Drain Current and Temperature

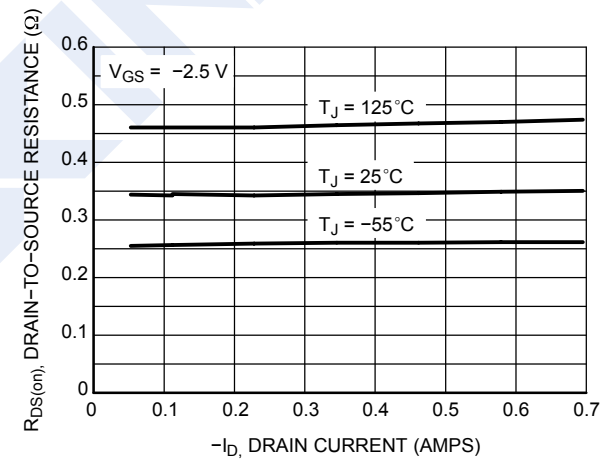


Figure 4. On-Resistance vs. Drain Current and Temperature

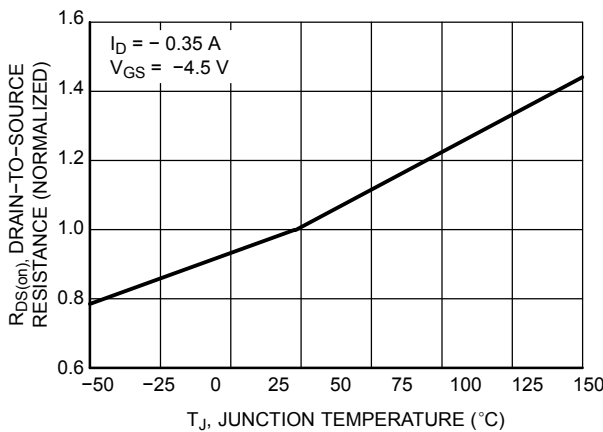


Figure 5. On-Resistance Variation with Temperature

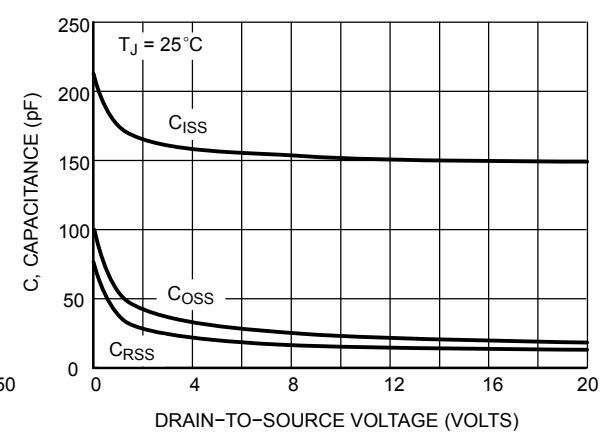


Figure 6. Capacitance Variation

## P-Channel MOSFET 2KJ6022

■ Typical Characteristics

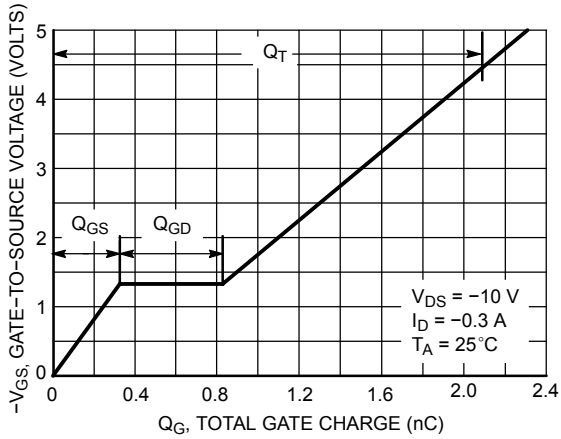


Figure 7. Gate-to-Source Voltage vs. Total Gate Charge

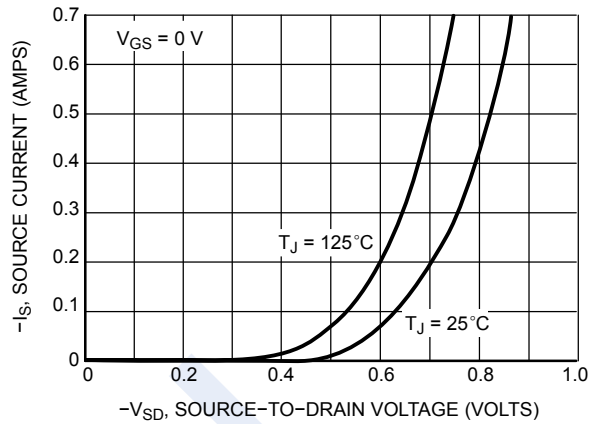


Figure 8. Diode Forward Voltage vs. Current

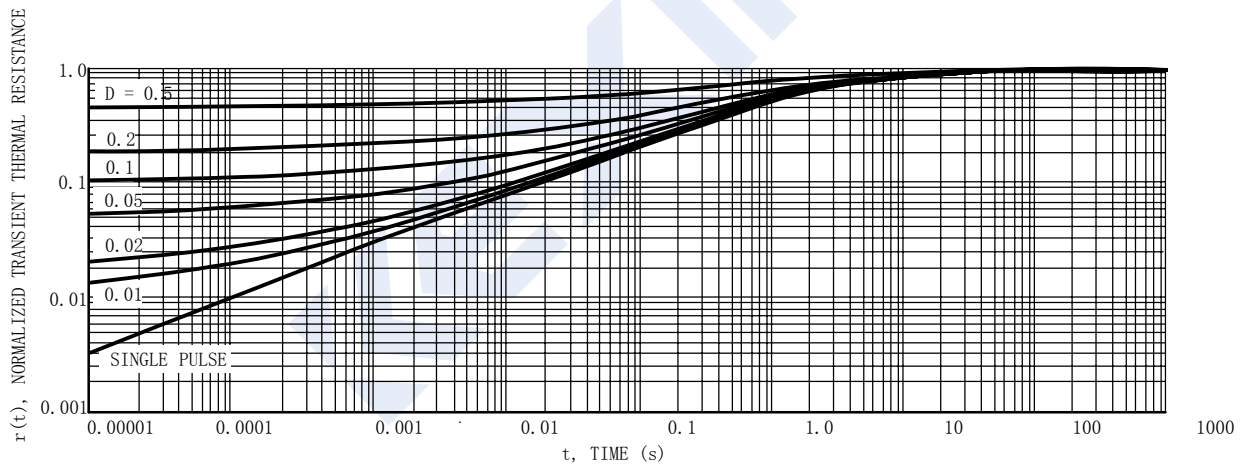


Figure 9. Normalized Thermal Response