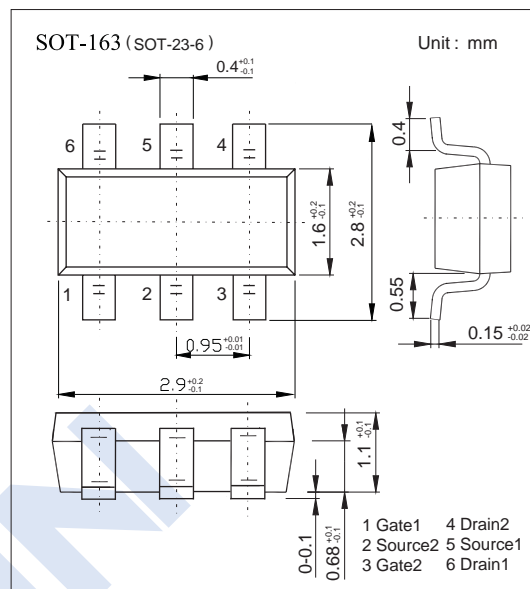
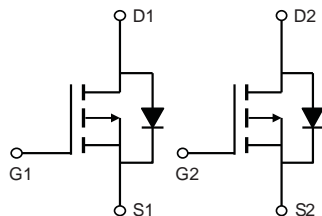


Dual P-channel MOSFET

2KJ6026

■ Features

- V_{DS} (V) = -20V
- I_D = -4.0A
- Low threshold voltage
- Very fast switching
- Trench MOSFET technology



■ Absolute Maximum Ratings (TA = 25°C Unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current, $t \leq 5$ s ^{*1}	I_D	-4.0	A
Pulsed Drain Current ($t_p \leq 10 \mu s$)	I_{DM}	-12	A
Power Dissipation	P_D	1210	mW
		515	
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	in free air ^{*2}	244
		in free air ^{*1}	104
		in free air; $t \leq 5$ s ^{*1}	64
Junction Temperature	T_J	150	°C
Junction Storage Temperature Range	T_{stg}	-55 to 150	

*1. Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated, mounting pad for drain 6 cm².

*2. Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.

Dual P-channel MOSFET

2KJ6026

■ Electrical Characteristics (T_A = 25°C Unless otherwise noted)

Parameter	Symbol	Test Conditions	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} =-20V, V _{GS} =0V			-1	μA
		V _{DS} =-20V, V _{GS} =0V, T _J = 150°C			-10	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±10V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.45		-0.95	V
Static Drain-Source On-Resistance (Note 1)	R _{DS(on)}	V _{GS} =-4.5V, I _D =-2A			80	mΩ
		V _{GS} =-2.5V, I _D =-1.5A			100	
Forward Transconductance (Note 1)	g _{FS}	V _{DS} =-10V, I _D =-2A		9		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, f=1MHz		804		pF
Output Capacitance	C _{oss}			95		
Reverse Transfer Capacitance	C _{rss}			66		
Total Gate Charge	Q _g	V _{DS} =-10V, I _D =-2A, V _{GS} = -4.5V		6.3	9.5	nC
Gate Source Charge	Q _{gs}			1.2		
Gate Drain Charge	Q _{gd}			0.9		
Turn-On Delay Time	t _{d(on)}	V _{DS} =-10V, I _D =-2A, V _{GS} = -4.5 V, R _{G(ext)} = 6 Ω		7		ns
Turn-On Rise Time	t _r			15		
Turn-Off Delay Time	t _{d(off)}			41		
Turn-Off Fall Time	t _f			14		
Maximum Body-Diode Continuous Current	I _S				-1.3	A
Diode Forward Voltage	V _{SD}	I _{SD} =-0.5 A, V _{GS} =0V			-1.2	V

■ Marking

Marking	JAP
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Dual P-channel MOSFET

2KJ6026

■ Typical Characteristics

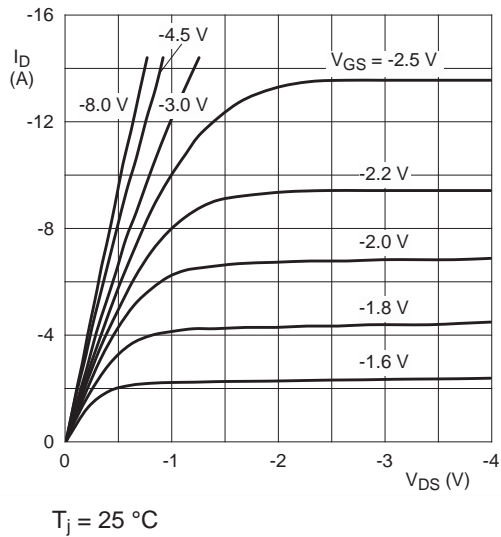
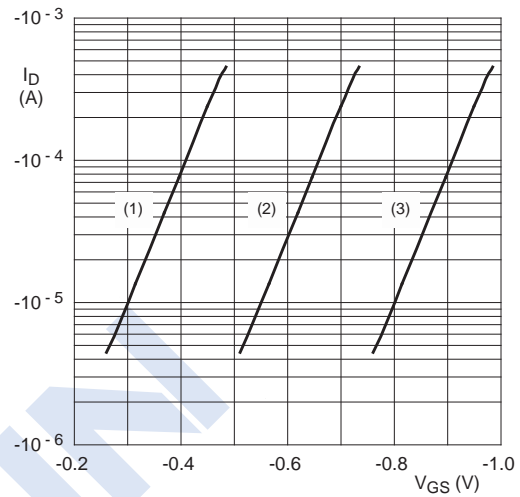


Fig. 1. Output characteristics: drain current as a function of drain-source voltage; typical values



(1) minimum values
(2) typical values
(3) maximum values

Fig. 2. Sub-threshold drain current as a function of gate-source voltage

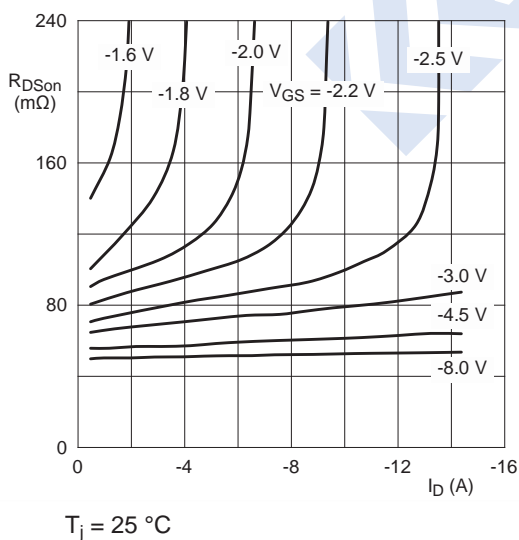


Fig. 3. Drain-source on-state resistance as a function of drain current; typical values

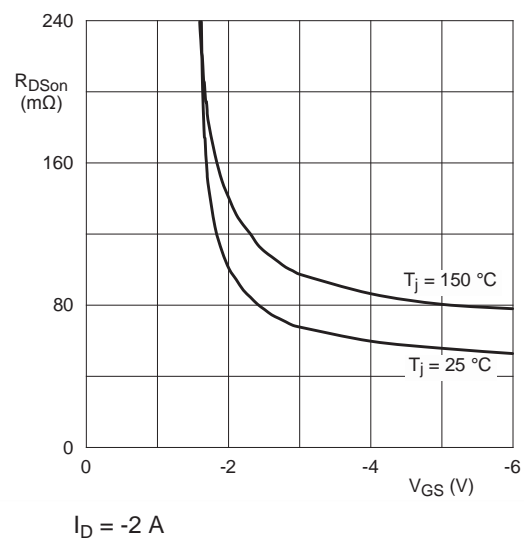
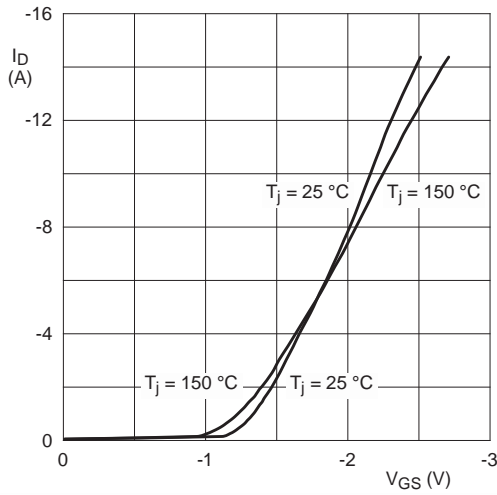


Fig. 4. Drain-source on-state resistance as a function of gate-source voltage; typical values

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$$V_{DS} > I_D \times R_{DSon}$$

Fig. 5. Transfer characteristics: drain current as a function of gate-source voltage; typical values

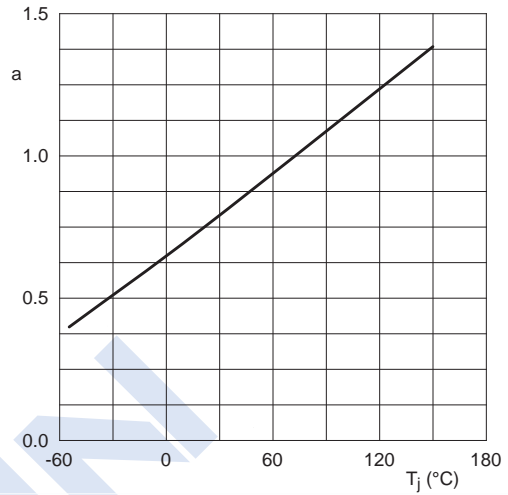
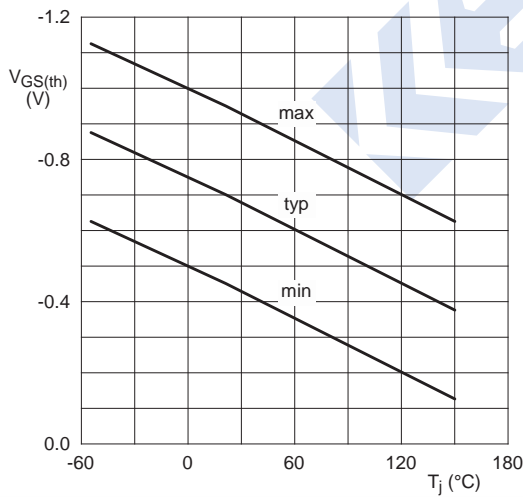


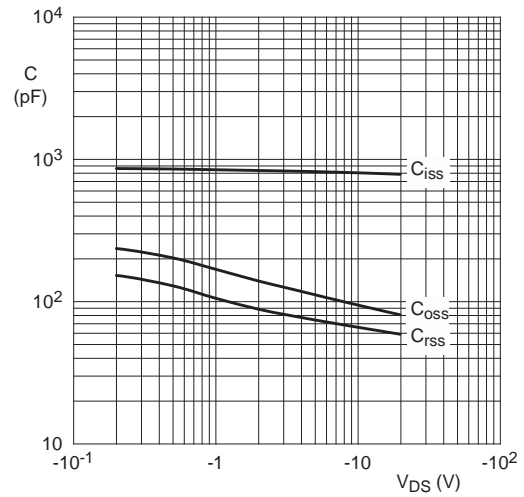
Fig. 6. Normalized drain-source on-state resistance as a function of junction temperature; typical values

$$a = \frac{R_{DSon}}{R_{DSon(25^\circ C)}}$$



$$I_D = -0.25 \text{ mA}; V_{DS} = V_{GS}$$

Fig. 7. Gate-source threshold voltage as a function of junction temperature



$$f = 1 \text{ MHz}; V_{GS} = 0 \text{ V}$$

Fig. 8. Input, output and reverse transfer capacitances as a function of drain-source voltage; typical values