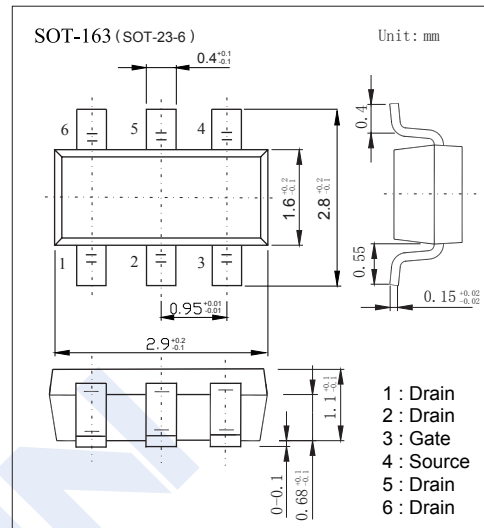


N-Channel Enhancement MOSFET

MCH6405 (KCH6405)

■ Features

- V_{DS} (V) = 20V
- I_D = 5.0 A
- $R_{DS(ON)} < 41m\Omega$ ($V_{GS} = 4V$)
- $R_{DS(ON)} < 54m\Omega$ ($V_{GS} = 2.5V$)

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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	
Continuous Drain Current	I_D	5	A
Pulsed Drain Current (Note.1)	I_{DP}	20	
Power Dissipation	P_D	1.5	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1 : $PW \leq 10 \mu\text{s}$, duty cycle $\leq 1\%$

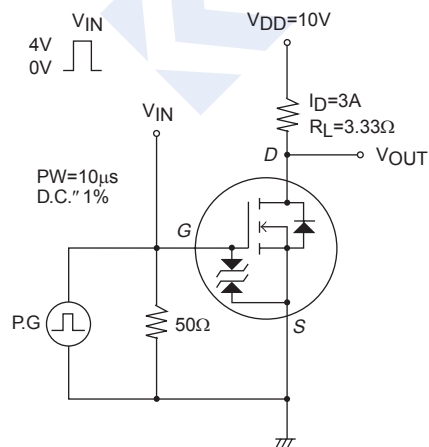
N-Channel Enhancement MOSFET

MCH6405 (KCH6405)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=1mA, V_{GS}=0V$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 8V$			± 10	
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	0.5		1.3	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=3A$	6.3	9		S
Static Drain-Source On-Resistance	$R_{DS(on)1}$	$V_{GS}=4V, I_D=3A$		31	41	$m\Omega$
	$R_{DS(on)2}$	$V_{GS}=2.5V, I_D=1.5A$		38	54	
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=10V, f=1MHz$		570		pF
Output Capacitance	C_{oss}			110		
Reverse Transfer Capacitance	C_{rss}			80		
Total Gate Charge	Q_g	$V_{GS}=4V, V_{DS}=10V, I_D=5A$		7.6		nC
Gate Source Charge	Q_{gs}			1.2		
Gate Drain Charge	Q_{gd}			2.1		
Turn-On DelayTime	$t_{d(on)}$	See specified Test Circuit		13		ns
Turn-On Rise Time	t_r			16		
Turn-Off DelayTime	$t_{d(off)}$			55		
Turn-Off Fall Time	t_f			54		
Maximum Body-Diode Continuous Current	I_S				5	A
Diode Forward Voltage	V_{SD}	$I_S=5A, V_{GS}=0V$		0.86	1.2	V

Switching Time Test Circuit



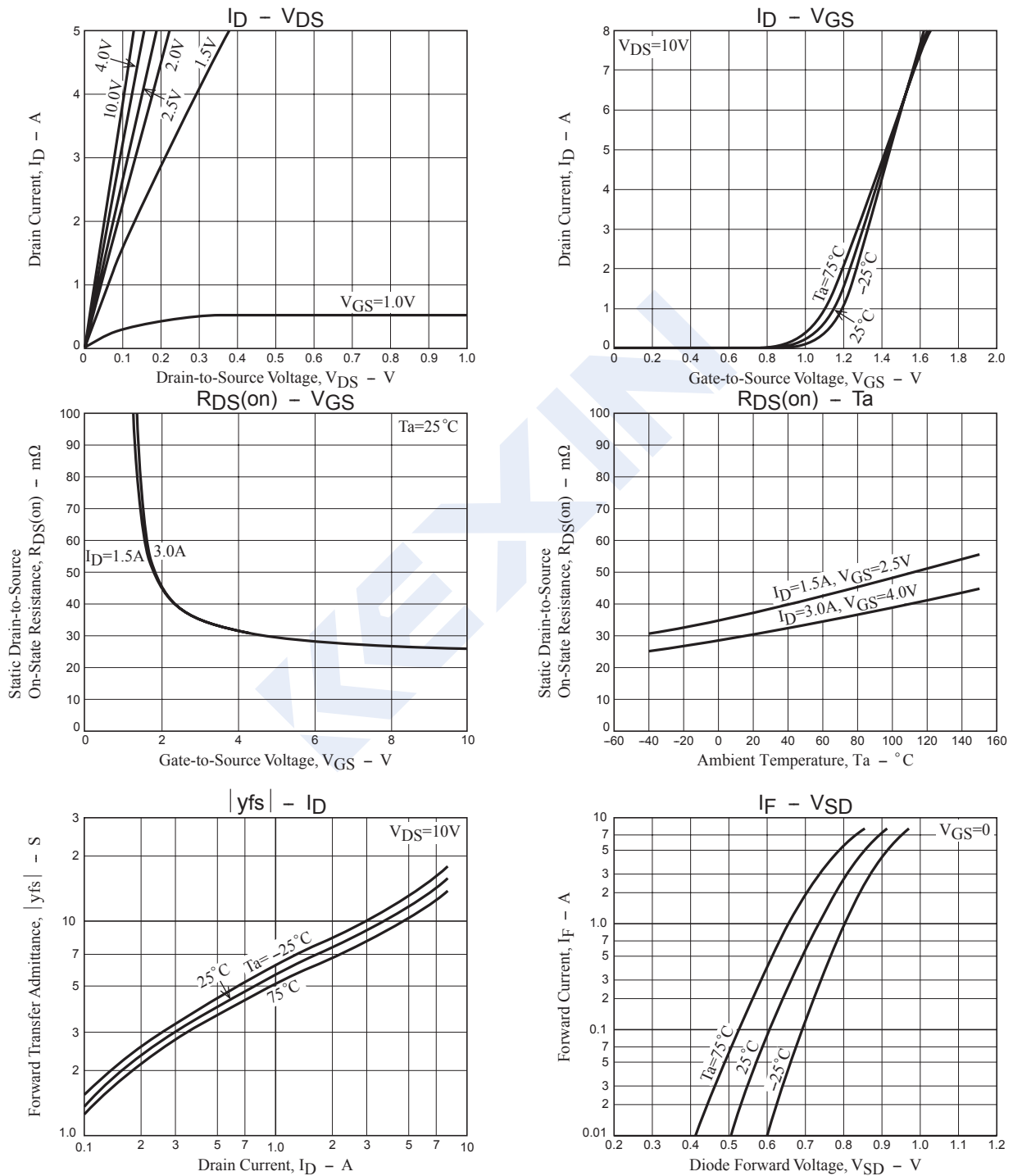
■ Marking

Marking	KE
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N-Channel Enhancement MOSFET

MCH6405 (KCH6405)

■ Typical Characteristics



N-Channel Enhancement MOSFET

MCH6405 (KCH6405)

■ Typical Characteristics

