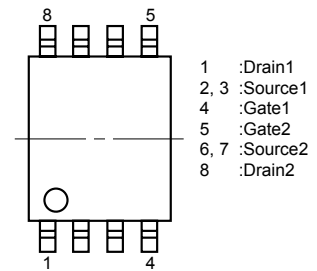
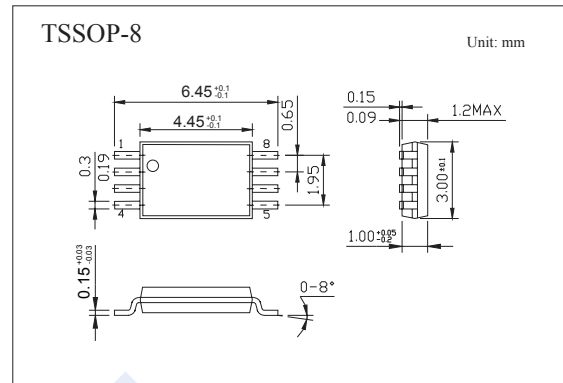
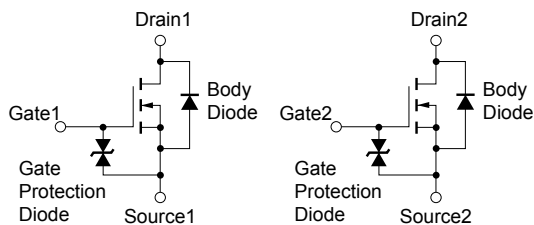


Dual N-Channel MOSFET

KX4N03W

■ Features

- Low C_{iss} $C_{iss} = 580$ pF TYP.
- Built-in G-S protection diode against ESD
- Low on-state resistance
 $R_{DS(on)1} = 67.0$ m MAX. ($V_{GS} = 10$ V, $I_D = 2.0$ A)
 $R_{DS(on)2} = 86.0$ m MAX. ($V_{GS} = 4.5$ V, $I_D = 2.0$ A)
 $R_{DS(on)3} = 95.0$ m MAX. ($V_{GS} = 4.0$ V, $I_D = 2.0$ A)



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	± 3.8	A
Pulsed Drain Current (Note.1)	I_{DM}	± 15.2	
Power Dissipation (Note.1)	P_D	1	W
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: $PW \leq 10$ μs , Duty Cycle $\leq 1\%$

■ Marking

Marking	4N03 KA***
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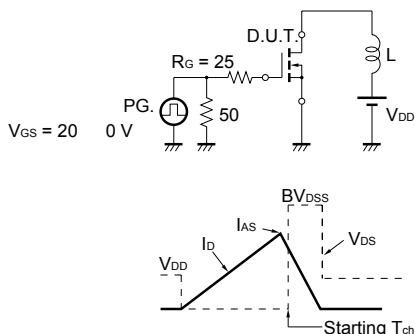
Dual N-Channel MOSFET

KX4N03W

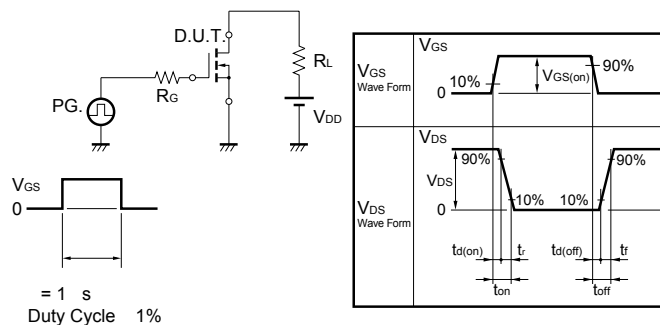
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60\text{ V}, V_{GS} = 0\text{ V}$			10	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$			± 10	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{ V}, I_D = 1\text{ mA}$	1.5		2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{ V}, I_D = 2.0\text{ A}$	2.5			S
Drain to Source On-state Resistance	$R_{DS(on)1}$	$V_{GS} = 10\text{ V}, I_D = 2.0\text{ A}$			67	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS} = 4.5\text{ V}, I_D = 2.0\text{ A}$			86	$\text{m}\Omega$
	$R_{DS(on)3}$	$V_{GS} = 4.0\text{ V}, I_D = 2.0\text{ A}$			95	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}$		580		pF
Output Capacitance	C_{oss}	$V_{GS} = 0\text{ V}$		100		pF
Reverse Transfer Capacitance	C_{rss}	$f = 1\text{ MHz}$		50		pF
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 30\text{ V}, I_D = 2.0\text{ A}$		10		ns
Rise Time	t_r	$V_{GS} = 10\text{ V}$		9		ns
Turn-off Delay Time	$t_{d(off)}$	$R_G = 6\Omega$		32		ns
Fall Time	t_f			4		ns
Total Gate Charge	Q_G	$V_{DD} = 48\text{ V}$		12		nC
Gate to Source Charge	Q_{GS}	$V_{GS} = 10\text{ V}$		2		nC
Gate to Drain Charge	Q_{GD}	$I_D = 3.8\text{ A}$		3		nC
Body Diode Forward Voltage	$V_{F(S-D)}$	$I_F = 3.8\text{ A}, V_{GS} = 0\text{ V}$		0.80		V
Reverse Recovery Time	t_{rr}	$I_F = 3.8\text{ A}, V_{GS} = 0\text{ V}$		33		ns
Reverse Recovery Charge	Q_{rr}	$di/dt = 100\text{ A}/\mu\text{s}$		58		nC
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = 250\mu\text{A}, V_{GS} = 0\text{ V}$	60			V

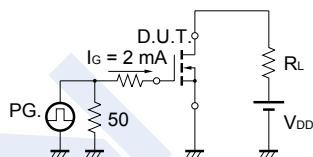
TEST CIRCUIT 1 AVALANCHE CAPABILITY



TEST CIRCUIT 2 SWITCHING TIME

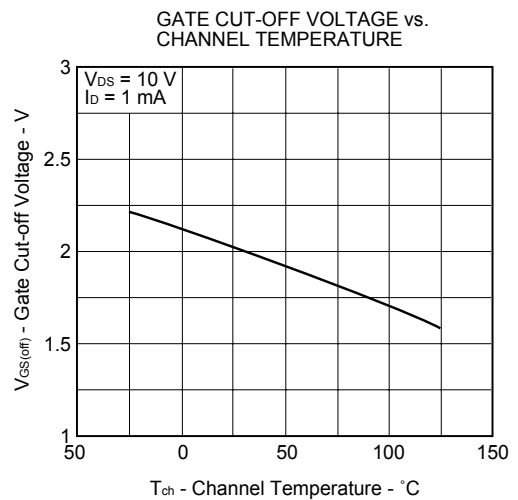
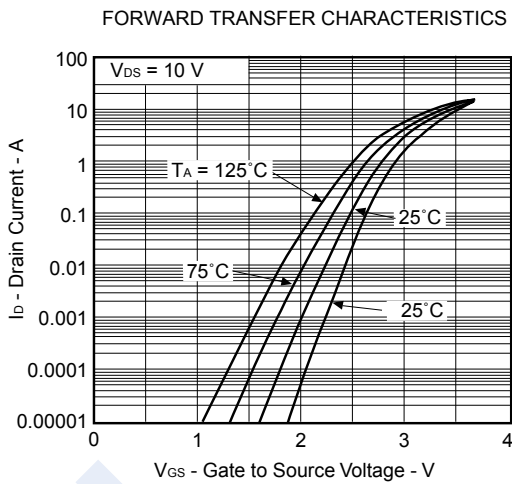
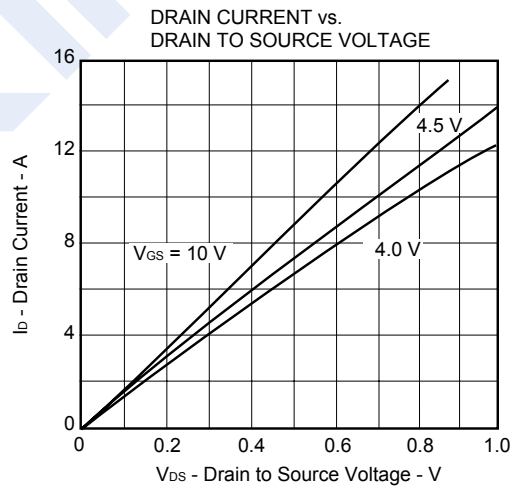
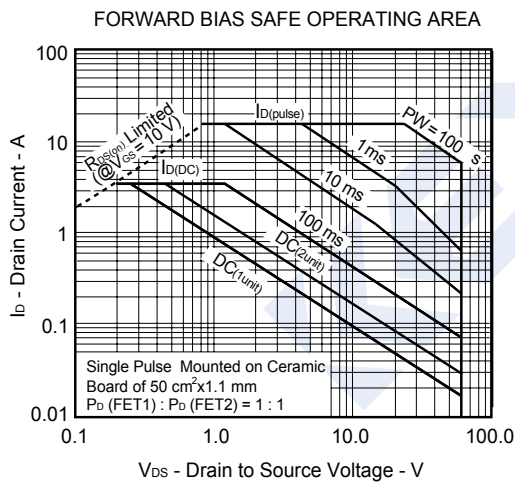
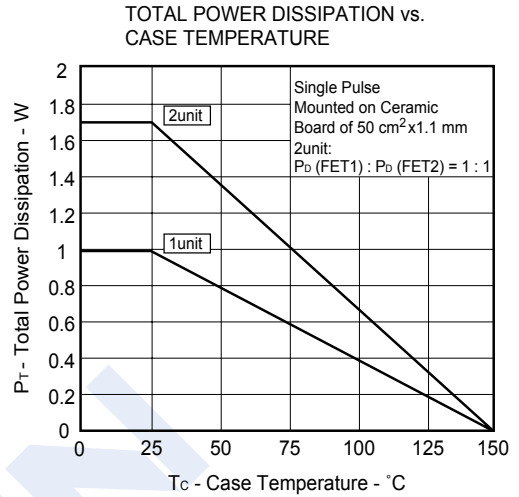
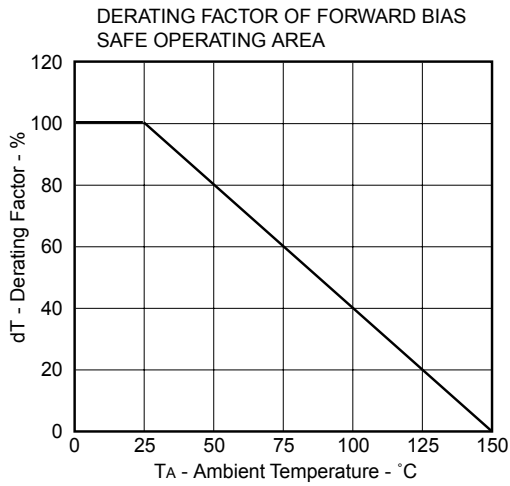


TEST CIRCUIT 3 GATE CHARGE



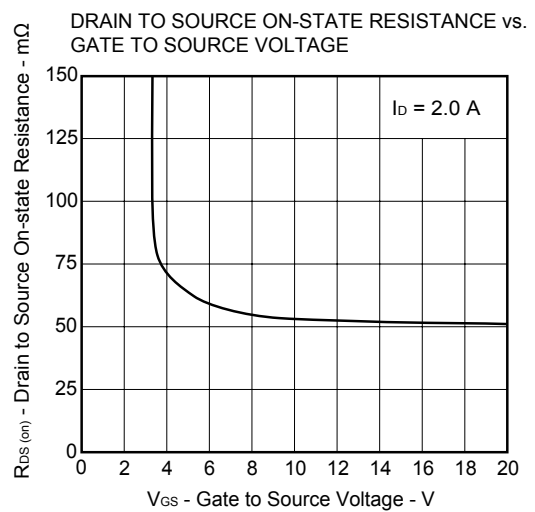
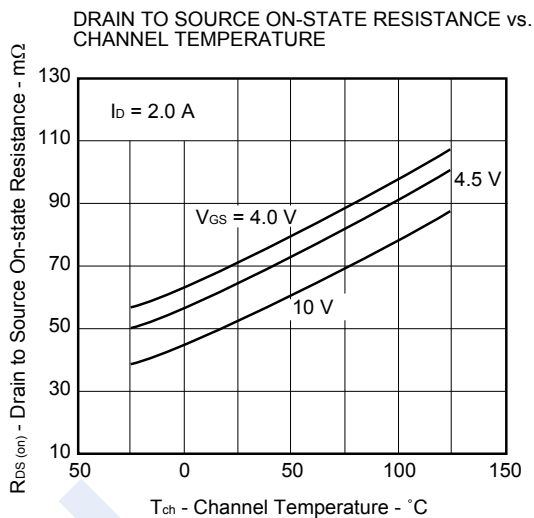
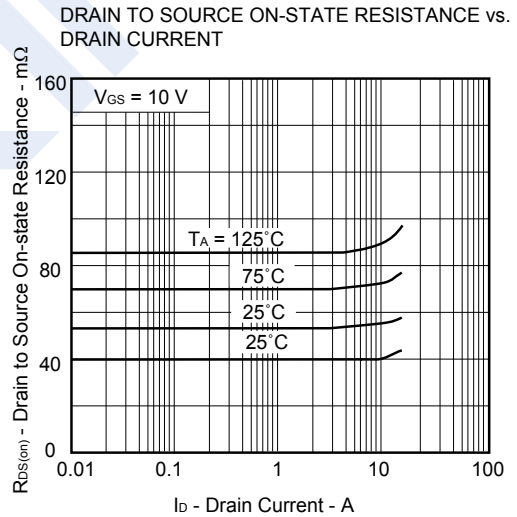
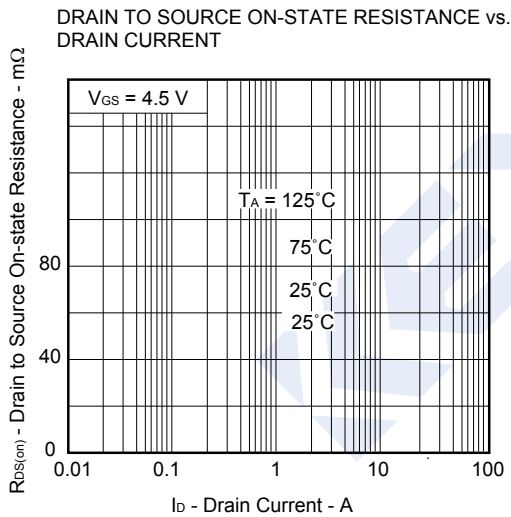
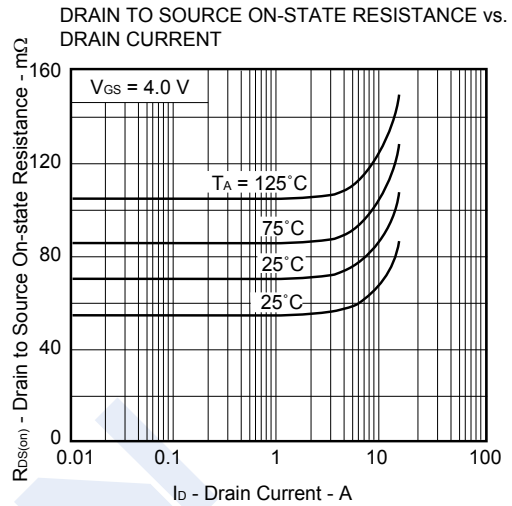
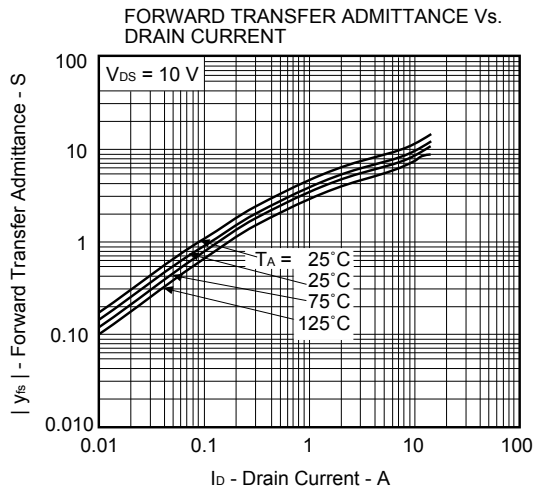
Dual N-Channel MOSFET KX4N03W

Typical Characteristics



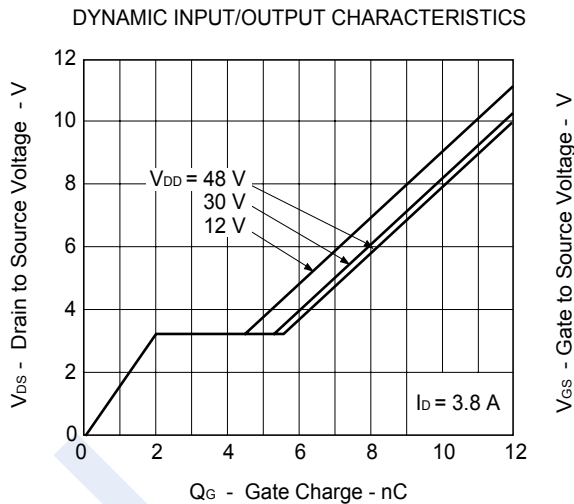
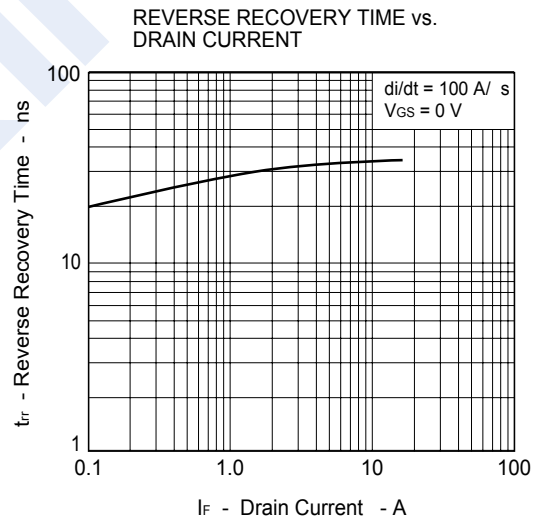
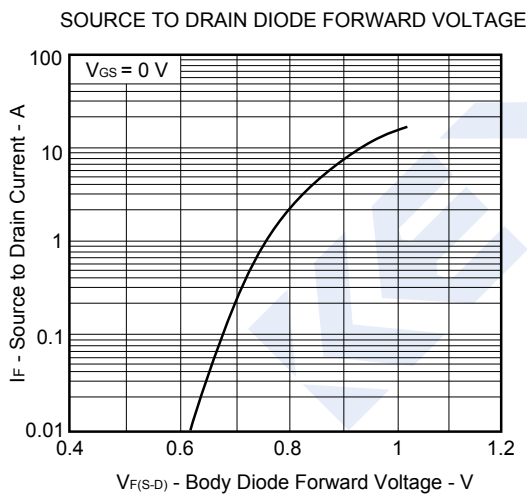
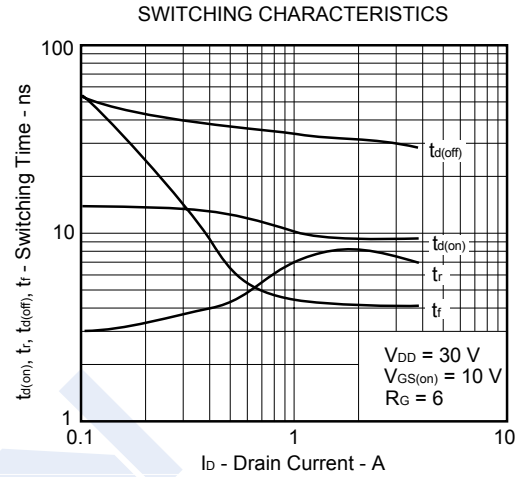
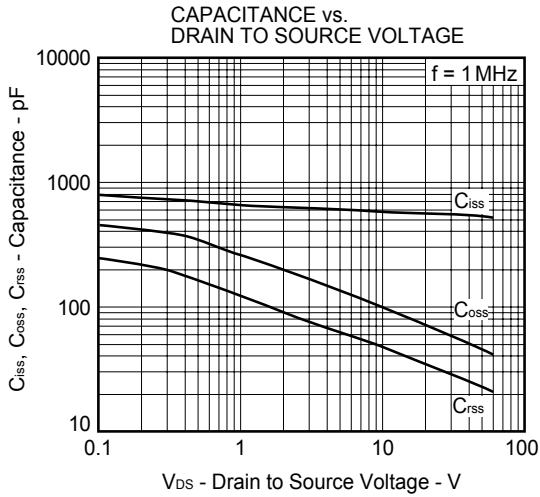
Dual N-Channel MOSFET KX4N03W

■ Typical Characteristics



Dual N-Channel MOSFET KX4N03W

■ Typical Characteristics



Dual N-Channel MOSFET KX4N03W

■ Typical Characteristics

