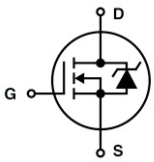
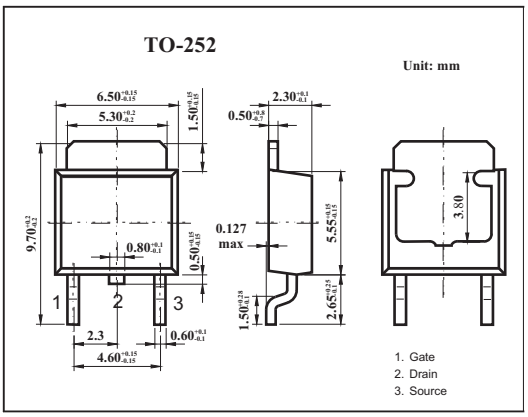
N-Channel MOSFET
KXU05N25

■ Features

- V_{DS} (V) = 250V
- $R_{DS(ON)}$ ≤ 1Ω (V_{GS} = 10V)





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	250	V
Gate source voltage	V_{GS}	±20	V
Drain Current — Continuous	I_D	5	A
Drain Current - Pulsed (Note 2)	I_{DM}	15	A
Power dissipation @ T_A = 25℃ (Note 1)	P_D	50	W
- Derate above 25℃		0.32	W/℃
Thermal resistance, junction - ambient	R_{thJA}	100	℃/W
Operating and storage temperature	T_j , T_{stg}	-55 to +150	℃

Note:1.Power rating when mounted on FR-4 glass epoxy printed circuit board using recommended footprint.

2.Pulse Test : Pulse width ≤ 300μs, Duty cycle ≤ 2%

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0 V, I_D = 250 μA	250			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 μA	2.0		4.0	V
Gate-Body leakage current	I_{GSS}	V_{GS} = ±20 V, V_{DS} = 0 V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =250 V, V_{GS} = 0 V			10	μA
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS} = 10 V, I_D = 2.5 A		0.81	1	Ω
Forward Transconductance	g_{FS}	V_{DS} = 15 V, I_D = 2.5A	1.5	2.6		S
Total Gate Charge	Q_g	V_{DS} = 200V ,V_{GS} = 10 V , I_D=5 A		13.2	15	nC
Gate-Source Charge	Q_{gs}			2.9		
Gate-Drain Charge	Q_{gd}			6.2		
Input Capacitance	C_{iss}	V_{DS} =25V ,V_{GS} = 0 , f = 1.0MHz		369	520	pF
Output Capacitance	C_{oss}			66	90	
Reverse Transfer Capacitance	C_{rss}			14	30	
Turn-On DelayTime	$t_{d(on)}$	V_{DD} = 125V ,V_{GS}=10V,R_G = 9.1Ω , I_D = 5A		9	10	ns
Turn-On Rise Time	t_r			18	40	
Turn-Off Delay Time	$t_{d(off)}$			21	40	
Turn-Off Fall Time	t_f			18	40	
Drain-Source Diode Forward Voltage	V_{SD}	I_S = 5 A,dIS / dt = 100 A/μs		0.93	1.6	V
Reverse Recovery Time	trr			147		ns
Maximum Body-Diode Continuous Current	I_S				5	A

■ Marking

Marking	5N25