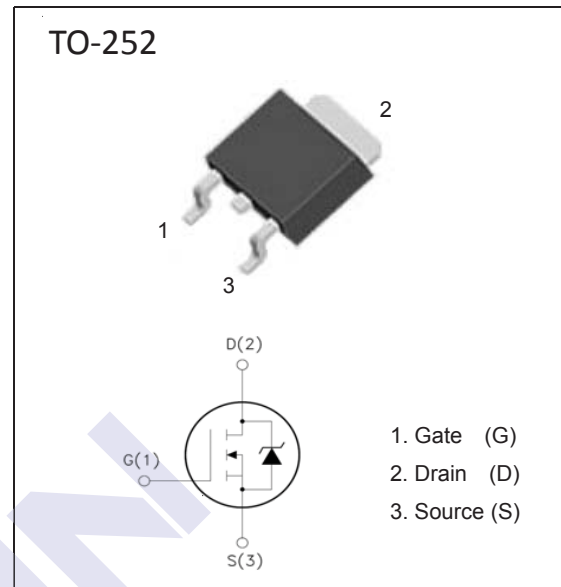


N-Channel MOSFET

2KK5062

■ Features

- $BV_{DSS} = 150V$, $I_D = 20A$
- $R_{DS(ON)} < 80m\Omega$ @ $V_{GS}=10V$, $I_D=10A$
- High Switching Speed
- Low gate charge



■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	150	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	20	A
Pulsed Drain Current ($t_p \leq 10\mu s$)	I_{DM}	60	
Single Pulse Avalanche Energy	EAS	60	mJ
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	110	$^{\circ}C/W$
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	2.5	
Maximum Power Dissipation	P_D	50	W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^{\circ}C$

2KK5062

■ Electrical Characteristics (T_J=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250μA, V _{GS} =0V	150			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =150V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
On Characteristics (Note 1)						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	2.0		4.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =20A			80	mΩ
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1MHz		1133	1627	pF
Output Capacitance	C _{oss}			332	474	
Reverse Transfer Capacitance	C _{rss}			105	174	
Switching Characteristics (Note 2)						
Turn-On Delay Time	t _{d(on)}	V _{DD} =75V, I _D =20A, V _{GS} =10V, R _G =9.1Ω		11	25	ns
Turn-On Rise Time	t _r			77	153	
Turn-Off Delay Time	t _{d(off)}			33	67	
Turn-Off Fall Time	t _f			49	97	
Total Gate Charge	Q _g	V _{DS} =75V, I _D =20A, V _{GS} =10V		39.1	55.9	nC
Gate Source Charge	Q _{gs}			7.5		
Gate Drain Charge	Q _{gd}			22		
Drain-Source Diode Characteristics						
Body Diode Voltage	V _{SD}	I _S =20A, V _{GS} =0V			1.5	V
Diode Forward Current	I _S				20	A
Body Diode Reverse Recovery Time	t _{rr}	V _{GS} =0V, I _S =20A, dI/dt = 100 A/μs		160		ns
Body Diode Reverse Recovery Charge	Q _{rr}				1.1	

Notes:

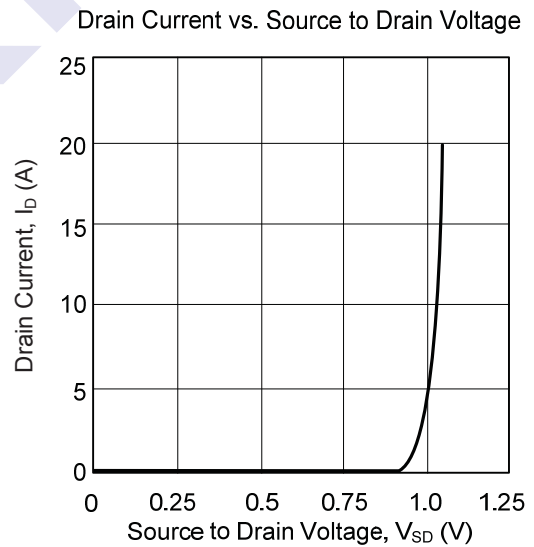
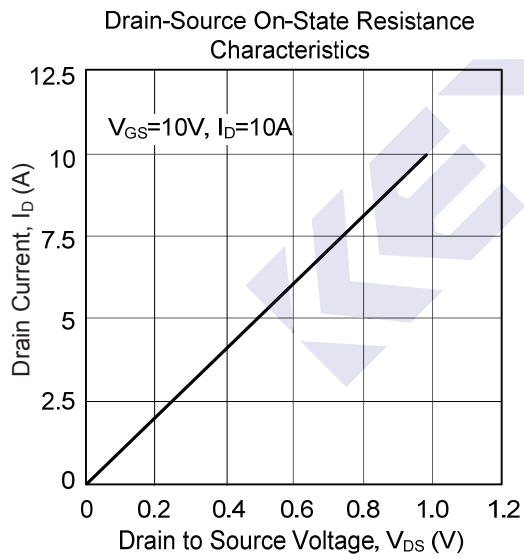
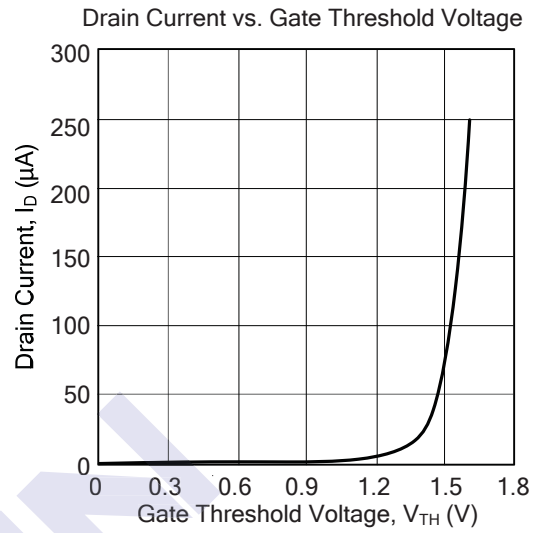
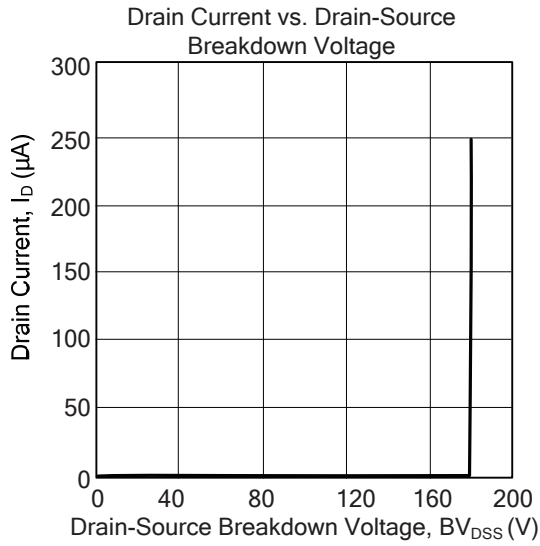
1. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
2. Switching characteristics are independent of operating junction temperature.

■ Marking

Marking	K5062 K****
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2KK5062

■ Typical Characteristics

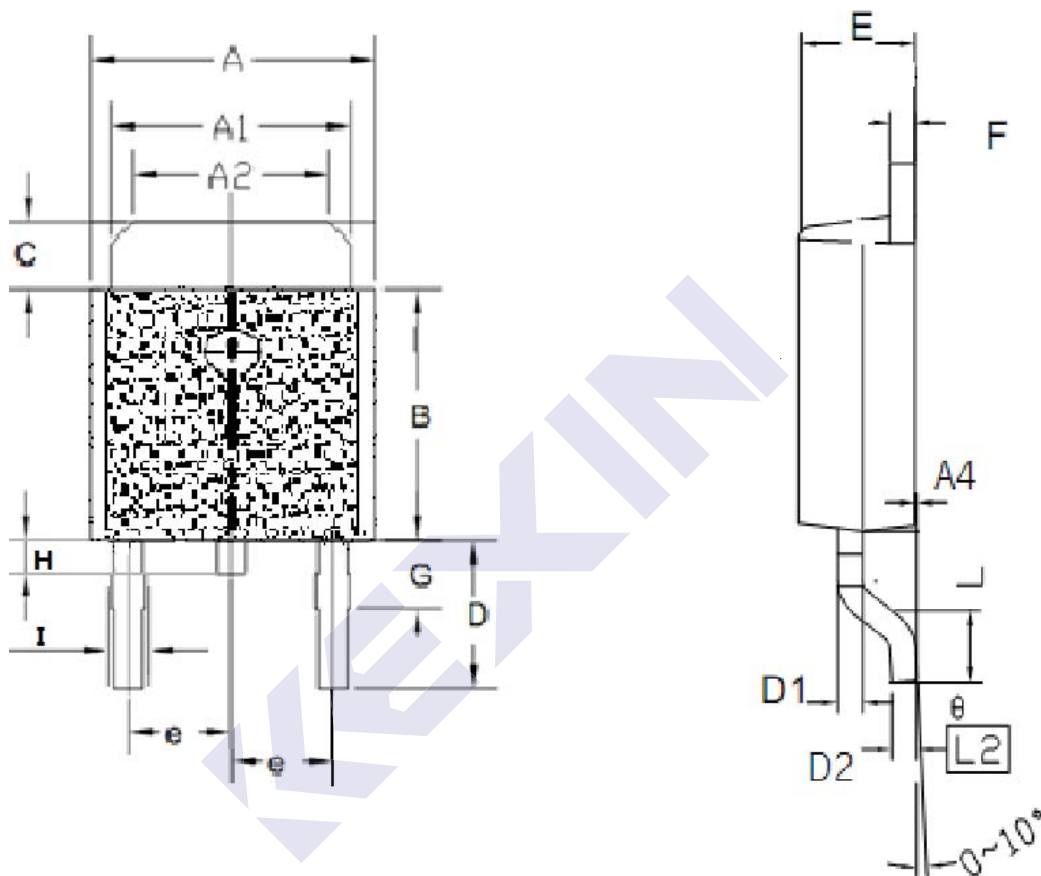


2KK5062

■ Package Dimension

TO-252

Units: mm



Symbol	Min	Max	Symbol	Min	Max
A	6.40	6.60	D	2.90	3.10
A1	5.20	5.40	D1	0.45	0.55
A2	4.40	4.60	D2	0.45	0.55
A3	4.40	4.60	e	2.30	
A4	0.00	0.15	E	2.20	2.40
A5	4.65	4.95	F	0.49	0.59
B	6.00	6.20	G	1.70	
B1	1.57	1.77	L	1.40	1.60
C	0.90	0.96	$\theta(^{\circ})$	0.00	10.00
I	0.60	0.90	H	0.49	0.52