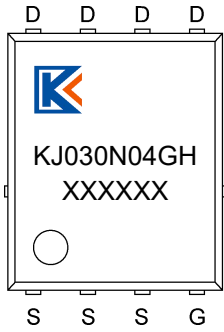
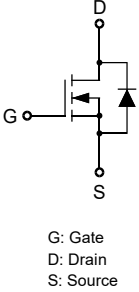


Product Information

V_{DS}	I_D	$R_{DS(ON)}, \text{ max}$	Package	Packaging	Quantity (pcs)
40 V	118 A	3 m Ω @ $V_{GS}=10V$	PDFN 5x6-8L	Tape & Reel	5000
Features • Surface-mounted package • Advanced SGT technology • Low on-resistance Applications • Load Switch • Power Management • Motor control and drive			  G: Gate D: Drain S: Source 1st Line: LOGO 2nd Line: Part number 3rd Line: LOT code 100% Avalanche Test RoHS & Halogen Free		

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Value	Unit
Drain-Source Voltage	V_{DS}	$T_C=25^\circ\text{C}$	40	V
Gate-Source Voltage	V_{GS}	$T_C=25^\circ\text{C}$	± 20	V
Continuous Drain Current (DC)	I_D	$T_C=25^\circ\text{C}, V_{GS}=10V$	118	A
		$T_C=100^\circ\text{C}, V_{GS}=10V$	75	A
Pulsed Drain Current	I_{DM}	$T_C=25^\circ\text{C}, V_{GS}=10V$	472	A
Power Dissipation	P_D	$T_C=25^\circ\text{C}$	69	W
Single Pulsed Avalanche Energy	E_{AS}	$L=0.3\text{mH}, V_{DS}=20V$	108	mJ

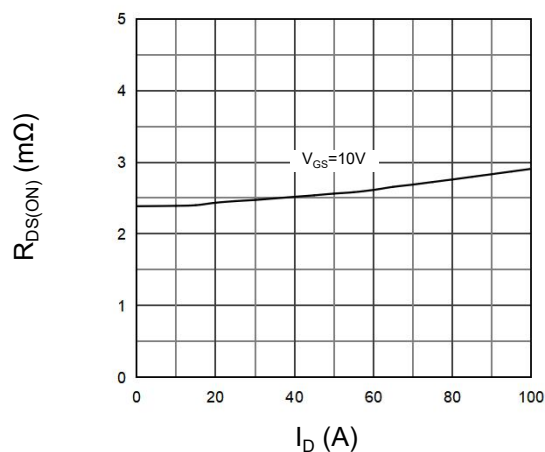
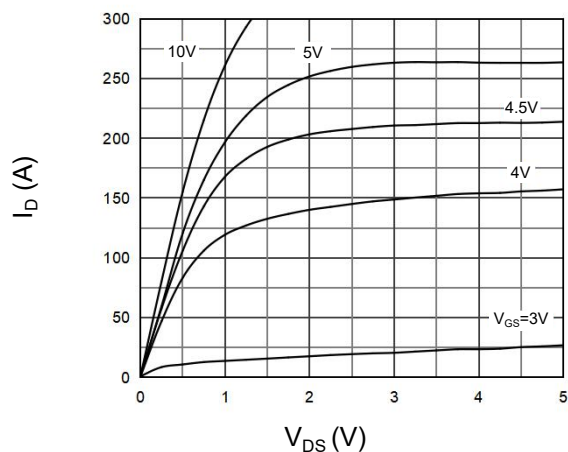
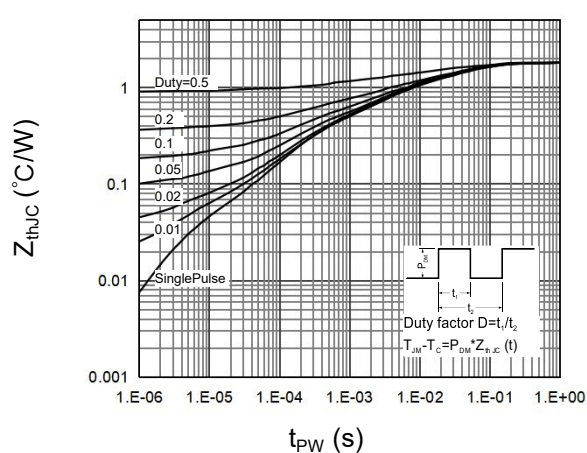
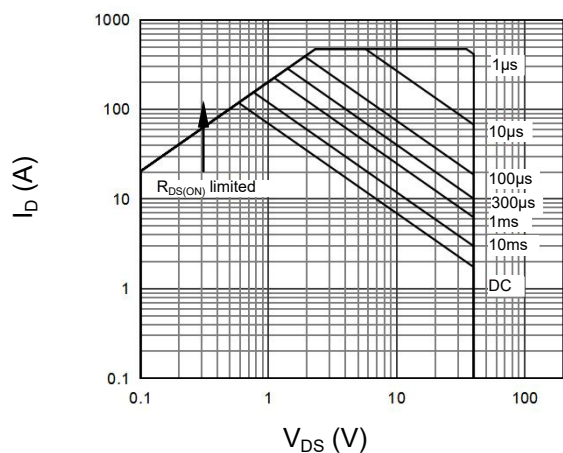
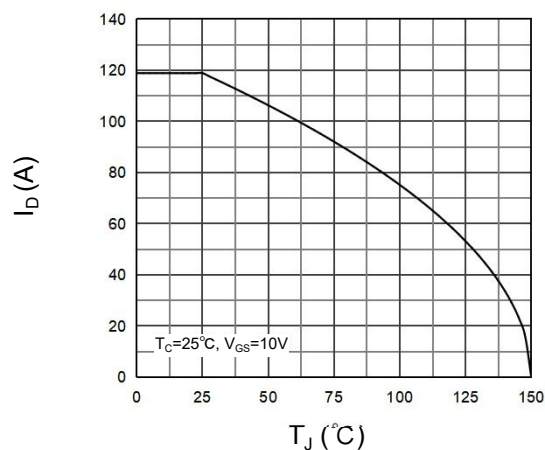
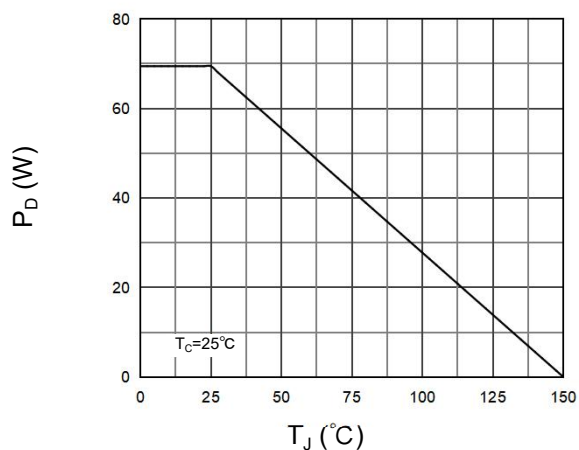
Package Values

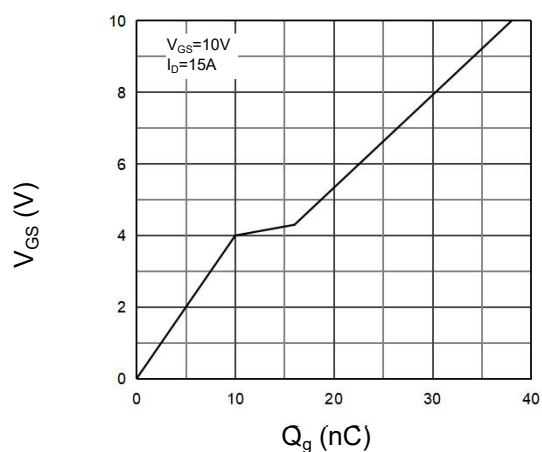
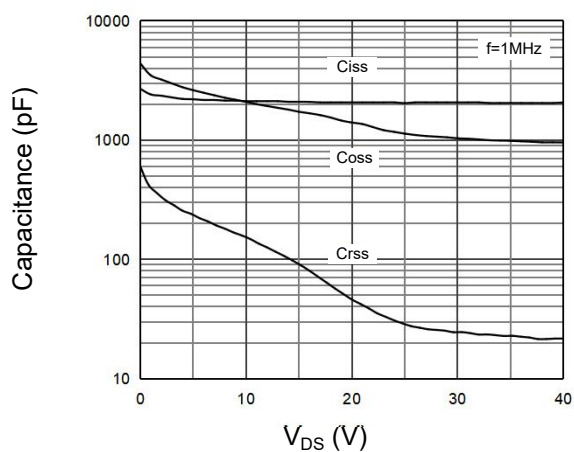
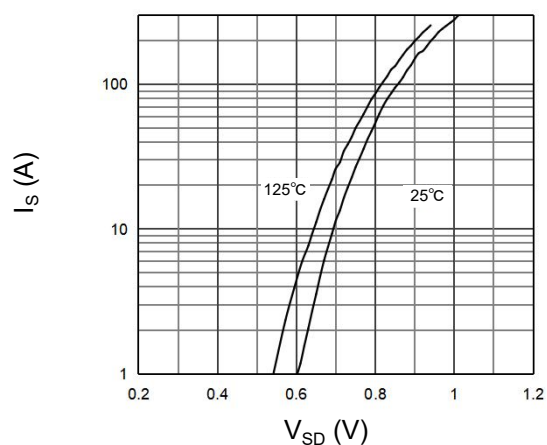
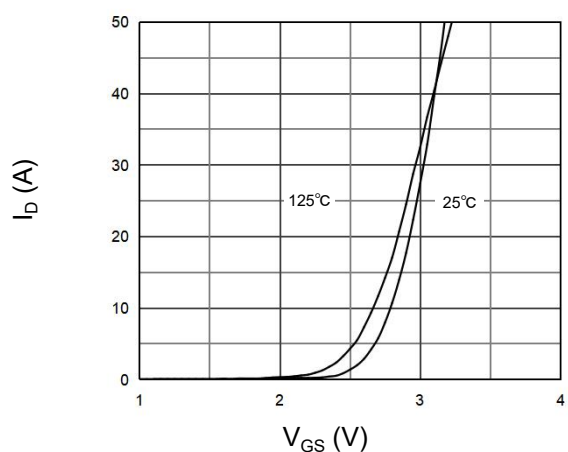
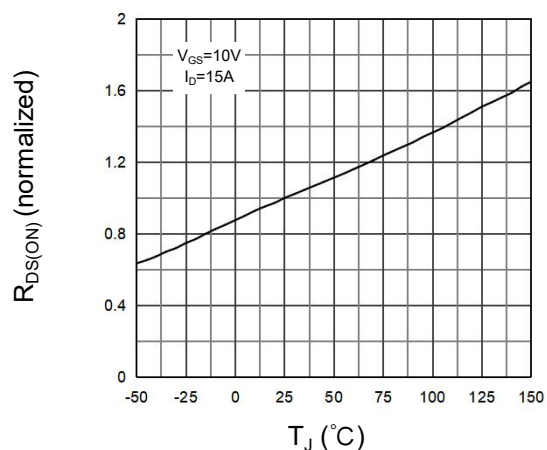
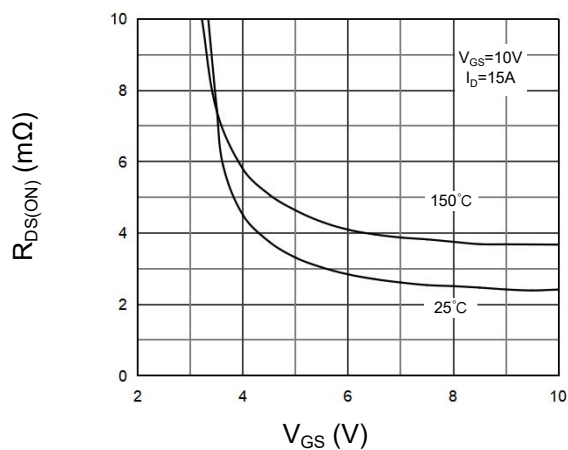
Parameter	Symbol	Value	Unit
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 — +150	$^\circ\text{C}$
Thermal Resistance, Junction to Ambient	R_{thJA}	69	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	R_{thJC}	1.8	$^\circ\text{C/W}$
Soldering temperature, wave and reflow soldering are allowed	T_{sld}	260	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Characteristic						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_{DS}=250\mu A$	40			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_{DS}=250\mu A$	2		3.8	V
Drain-Source Leakage Current	I_{DSS}	$V_{GS}=0V, V_{DS}=40V$			1	μA
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=15A$		2.5	3	m Ω
Dynamic Characteristic						
Gate Resistance	R_G	Frequency=1MHz		2		Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, V_{GS}=0V,$ Frequency=1MHz		2120		pF
Output Capacitance	C_{oss}			1165		pF
Reverse Transfer Capacitance	C_{rss}			46		pF
Total Gate Charge	Q_g	$V_{DS}=20V, V_{GS}=10V,$ $I_{DS}=15A$		38		nC
Gate to Source Charge	Q_{gs}			10		nC
Gate to Drain Charge	Q_{gd}			6		nC
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=20V, V_{GS}=10V,$ $R_G=2.7\Omega$		12		ns
Turn-on Rise Time	t_r			82		ns
Turn-off Delay Time	$t_{d(off)}$			26		ns
Turn-off Fall Time	t_f			4		ns
Body Diode Characteristics						
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_{SD}=15A$			1.4	V
Reverse Recovery Time	t_{rr}	$I_F=15A, dI/dt=100A/\mu s$		38		ns
Reverse Recovery Charge	Q_{rr}			28		nC

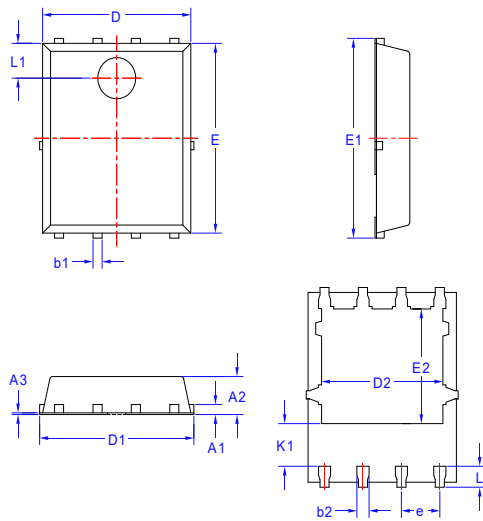
Typical Characteristics





Package Dimensions

PDFN 5x6-8L package



Symbol	Dimensions in Millimeters		
	MIN	NOM	MAX
A1		0.254BSC	
A2	1	1.1	1.2
A3	0.005		0.02
b1	0.25	0.3	0.35
b2	0.35	0.4	0.45
D	4.8	4.9	5
D1	5	5.1	5.2
D2	3.91	4.01	4.11
E	5.65	5.75	5.85
E1	5.95	6.05	6.15
E2	3.375	3.475	3.575
e		1.270TYP	
K		0.600REF	
K1		1.235REF	
L	0.53	0.63	0.73
L1		1.000REF	

Revision History

Date	Revision	Major change
2026.05.27	V1.0	Modify the style of the datasheet

Disclaimer

1. Unless otherwise specified in the datasheet, the product is designed and qualified as a standard commercial product and is not intended for use in applications that require extraordinary levels of quality and reliability, such as automotive, aviation/aerospace and life-support devices or systems.
2. Any and all semiconductor products have certain probability to fail or malfunction, which may result in personal injury, death or property damage. Customer are solely responsible for providing adequate safe measures when design their systems.
3. KJX Semi reserves the right to improve product design, function and reliability without notice.

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