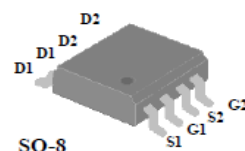
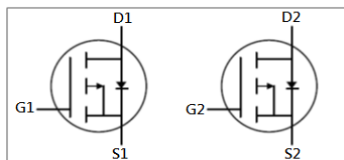


- Simple Drive Requirement
- Fast Switching Characteristic
- Low On-resistance
- RoHS Compliant & Halogen-Free

BVDSS	-30V
RDS(ON)typ	18mΩ
ID	-9A



Description

KE9203 is from Kingeavy innovated design and silicon process technology to achieve the lowest possible on- resistance and fast switching performance. It provides the designer with an extreme efficient device for use in a wide range of power applications.

Absolute Maximum Ratings@T_J=25°C(unless otherwise specified)

Symbol	Parameter	Rating	Units
VDS	Drain-Source Voltage	-30	V
VGS	Gate-Source Voltage	±20	V
I _D @T _A =25°C	Drain Current, V _{GS} @ 10V ₃	-9	A
I _D @T _A =70°C	Drain Current, V _{GS} @ 10V ₃	-6.5	A
I _{DM}	Pulsed Drain Current ¹	-30	A
P _D @T _A =25°C	Total Power Dissipation	2	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	150	°C

Thermal Data

Symbol	Parameter	Value	Unit
Rthj-a	Maximum Thermal Resistance, Junction-ambient ₃	62.5	°C/W

Electrical Characteristics@T_j=25 oC(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV _{DSS}	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	-30	-	-	V
RDS(ON)	Static Drain-Source On-Resistance ²	VGS=-10V, ID=-8A	-	18	23	mΩ
		VGS=-4.5V, ID=-5A	-	25	35	mΩ
V _{GS(th)}	Gate Threshold Voltage	VDS=VGS, ID=250uA	-1	-	-3	V
g _{fs}	Forward Transconductance	VDS=-5V, ID=-10A	-	18	-	S
I _{DSS}	Drain-Source Leakage Current	VDS=-30V, VGS=0V	-	-	-1	uA
I _{GSS}	Gate-Source Leakage	VGS=±20V, VDS=0V	-	-	±100	nA
Q _g	Total Gate Charge	ID=-5A	-	12	19.2	nC
Q _{gs}	Gate-Source Charge	VDS=-15V	-	4.5	-	nC
Q _{gd}	Gate-Drain ("Miller") Charge	VGS=-4.5V	-	4	-	nC
t _{d(on)}	Turn-on Delay Time	VDS=-15V ID=-1A RG=6.8Ω VGS=-10V	-	11	-	ns
t _r	Rise Time		-	7	-	ns
t _{d(off)}	Turn-off Delay Time		-	43	-	ns
t _f	Fall Time		-	20	-	ns
C _{iss}	Input Capacitance	VGS=0V	-	880	-	pF
C _{oss}	Output Capacitance	VDS=-25V	-	184	-	pF
Crss	Reverse Transfer Capacitance	f=1.0MHz	-	140	-	pF

Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V _{SD}	Forward On Voltage ²	IS=1.7A, VGS=0V	-	-	-1.2	V
t _{rr}	Reverse Recovery Time	IS=-9A, VGS=0V dI/dt=100A/μs	-	12	-	ns
Q _{rr}	Reverse Recovery Charge		-	5	-	nC

Notes:

- 1.Pulse test <300uS, duty cycle<2%
- 2.Pulse width limited by Max. junction temperature.
- 3.Surface mounted on 1 in2 2oz copper pad of FR4 board, t <10sec ; 125oC/W when mounted on min. copper pad.

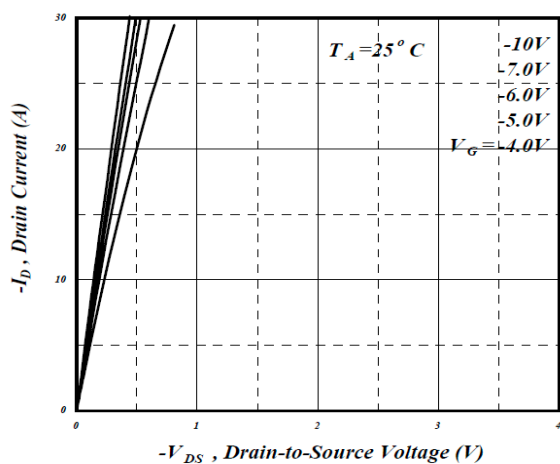


Fig 1. Typical Output Characteristics

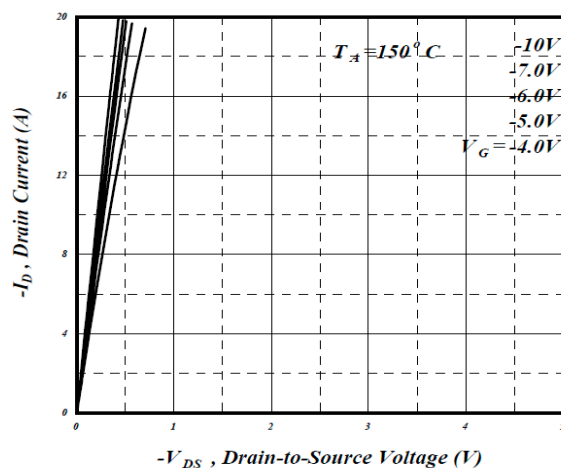


Fig 2. Typical Output Characteristics

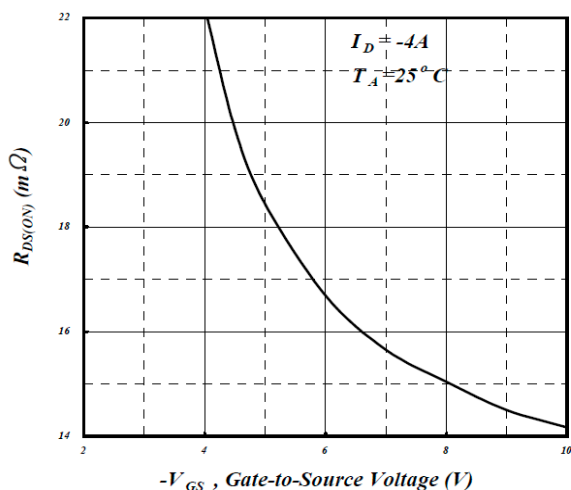


Fig 3. On-Resistance v.s. Gate Voltage

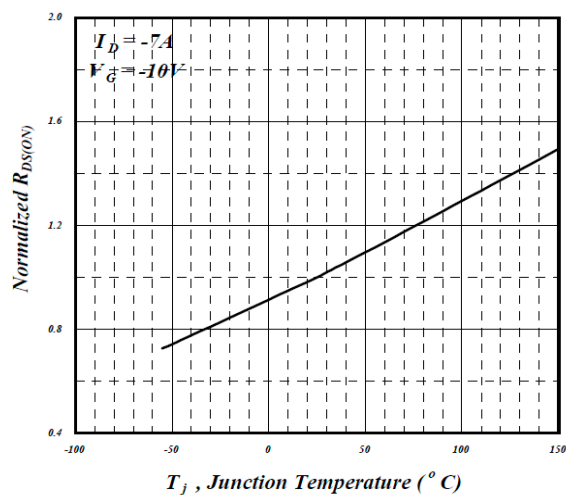


Fig 4. Normalized On-Resistance v.s. Junction Temperature

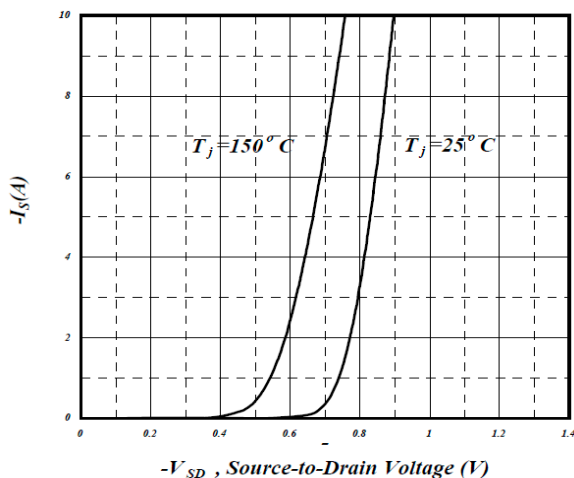


Fig 5. Forward Characteristic of Reverse Diode

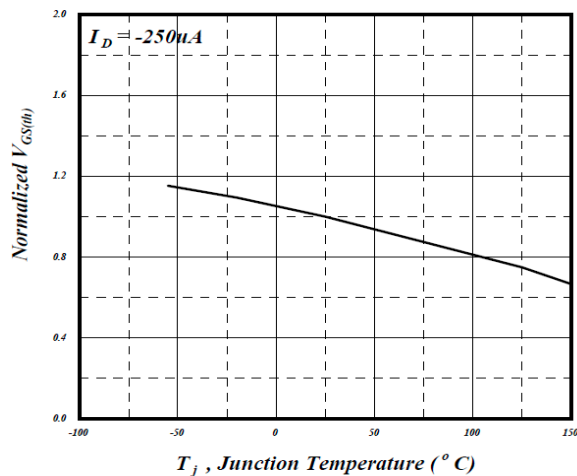


Fig 6. Gate Threshold Voltage v.s. Junction Temperature

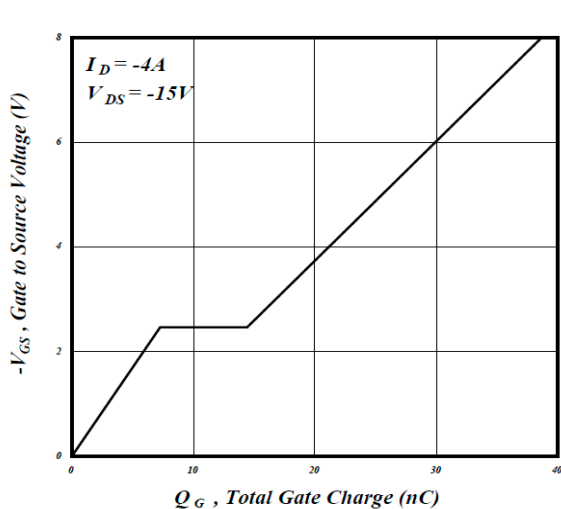


Fig 7. Gate Charge Characteristics

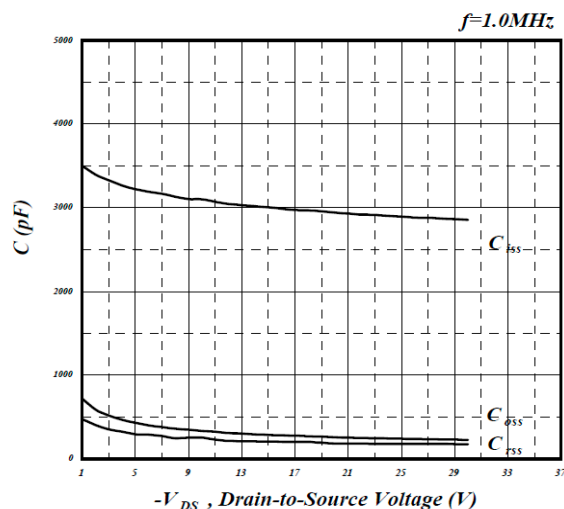


Fig 8. Typical Capacitance Characteristics

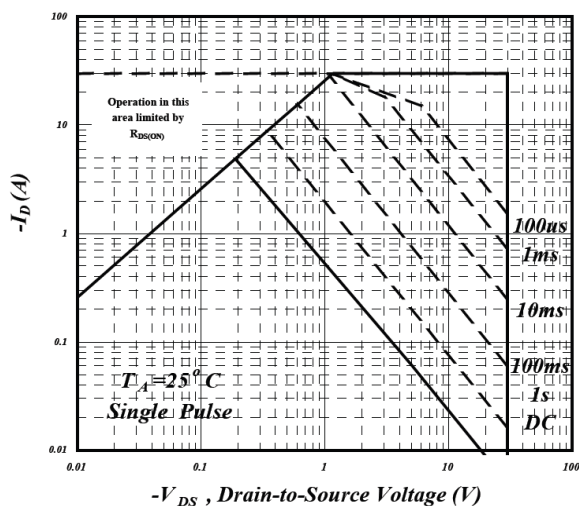


Fig 9. Maximum Safe Operating Area

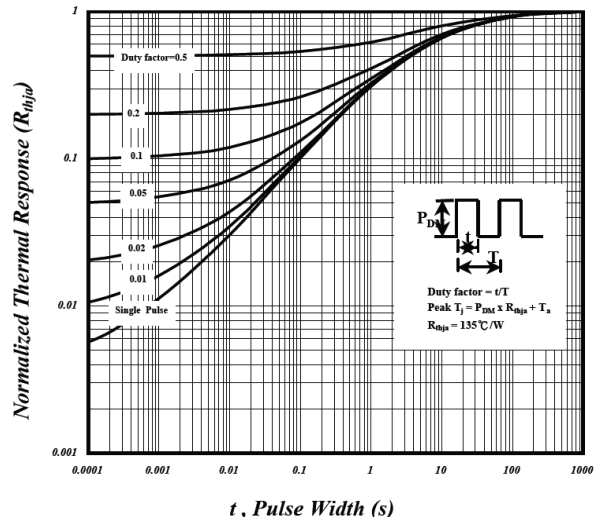


Fig 10. Effective Transient Thermal Impedance

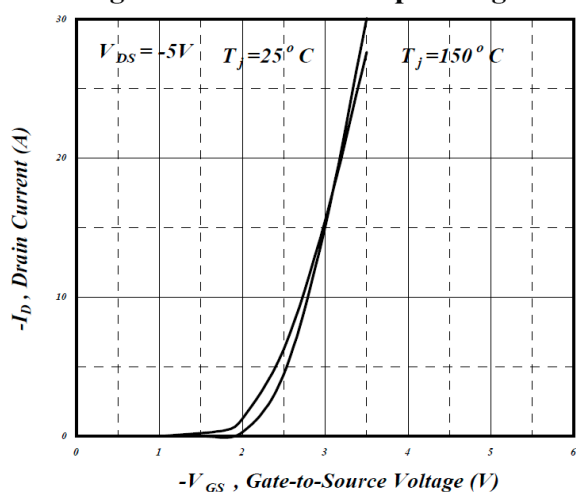


Fig 11. Transfer Characteristics

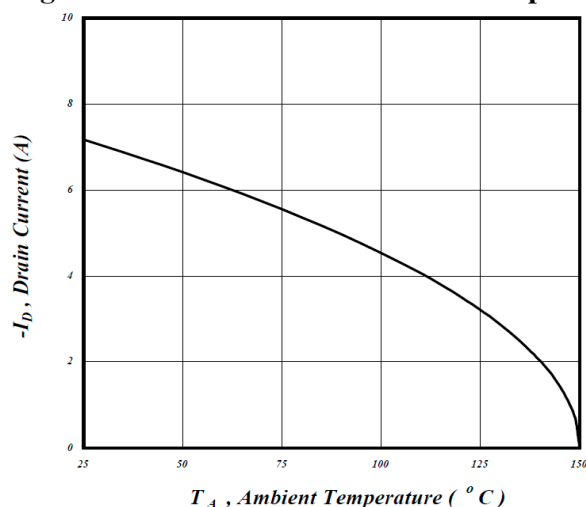


Fig 12. Drain Current v.s. Ambient
Temperature

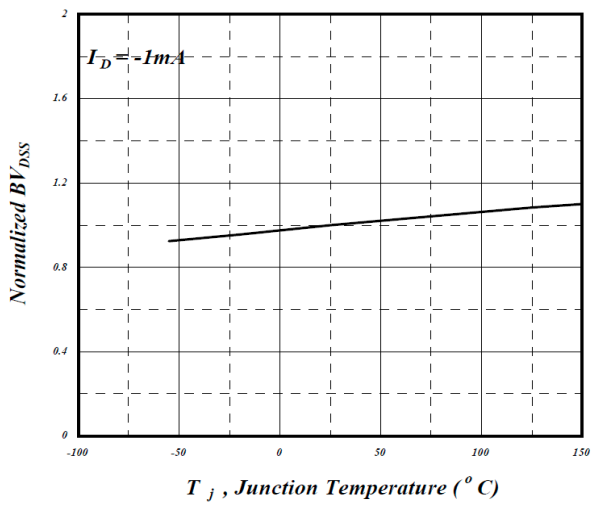


Fig 13. Normalized BV_{DSS} v.s. Junction Temperature

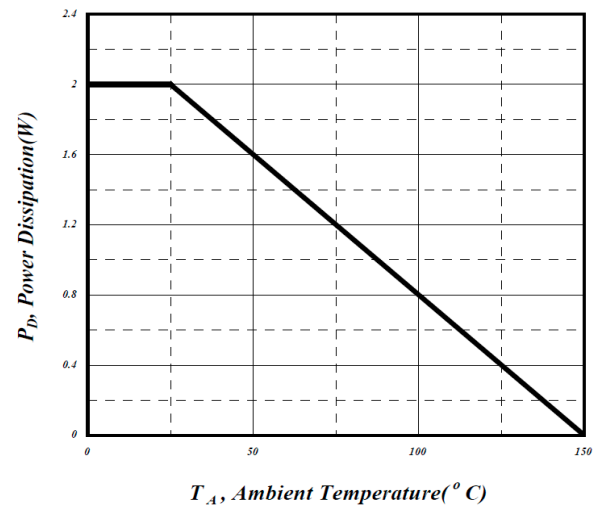
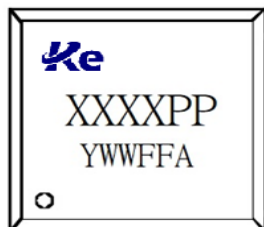


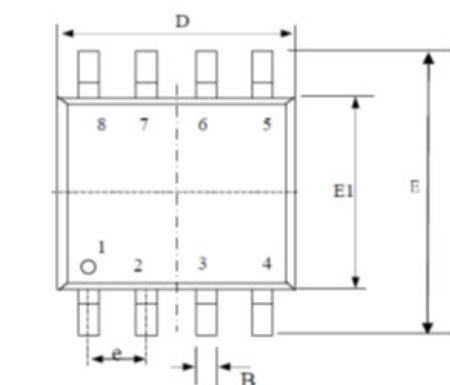
Fig 14. Total Power Dissipation

Marking Information

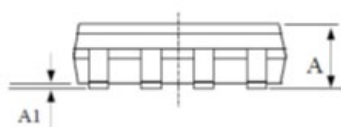


Package	SOIC-8	
XXXX	Part Number	
PP	Package Code	
Y	Year	I=2023 , J=2024,
WW	Weeks	Ex. 10/27=44weeks, 11/3=45weeks
FF	Wafer lot	Lot No.
A	Serial	Serial No.
Dot	First pin	

Package Outline : SO-8



SYMBOLS	Millimeters		
	MIN	NOM	MAX
A	1.35	1.55	1.75
A1	0.05	0.15	0.25
B	0.30	0.41	0.51
D	4.80	5.05	5.30
E	5.79	6.00	6.20
E1	3.70	3.90	4.10
e	1.27 TYP		
G	0.17	0.21	0.25
F	0.38	0.83	1.27
α	0°	4°	8°



1. All Dimension Are In Millimeters.
2. Dimension Does Not Include Mold Protrusions.