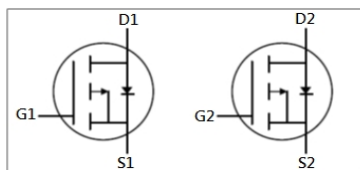


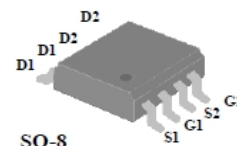
- Simple Drive Requirement
- Low On-resistance
- Fast Switching Characteristic
- RoHS Compliant & Halogen-Free



BV_{DSS}	-30V
$R_{DS(ON)typ}$	25mΩ
I_D	-7.2A

Description

KE9207 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@ $T_J=25^{\circ}\text{C}$ (unless otherwise specified)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 20	V
$I_D@T_A=25^{\circ}\text{C}$	Drain Current, $V_{GS} @ 10V_3$	-7.2	A
$I_D@T_A=70^{\circ}\text{C}$	Drain Current, $V_{GS} @ 10V_3$	-5	A
I_{DM}	Pulsed Drain Current ¹	-25	A
$P_D@T_A=25^{\circ}\text{C}$	Total Power Dissipation	2	W
E_{AS}	Single Pulse Avalanche Energ ⁴	13	mJ
T_{STG}	Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$
T_J	Operating Junction Temperature Range	-55 to 150	$^{\circ}\text{C}$

Thermal Data

Symbol	Parameter	Value	Unit
R_{thj-a}	Maximum Thermal Resistance, Junction-ambient ³	62.5	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics@T_j=25 °C(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	-30	-	-	V
R _{DS(ON)}	Static Drain-Source On-Resistance ²	V _{GS} =-10V, I _D =-7A	-	25	30	mΩ
		V _{GS} =-4.5V, I _D =-4A	-	37	42	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	-1	-	-2.2	V
g _{fs}	Forward Transconductance	V _{DS} =-5V, I _D =-7A	-	18	-	S
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-30V, V _{GS} =0V	-	-	-1	uA
I _{GSS}	Gate-Source Leakage	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
Q _g	Total Gate Charge	I _D =-5A	-	23	38	nC
Q _{gs}	Gate-Source Charge	V _{DS} =-15V	-	7	-	nC
Q _{gd}	Gate-Drain ("Miller") Charge	V _{GS} =-4.5V	-	7	-	nC
t _{d(on)}	Turn-on Delay Time	V _{DS} =-15V	-	13	-	ns
t _r	Rise Time	I _D =-1A	-	9	-	ns
t _{d(off)}	Turn-off Delay Time	R _G =3.3Ω	-	70	-	ns
t _f	Fall Time	V _{GS} =-10V	-	32	-	ns
C _{iss}	Input Capacitance	V _{GS} =0V	-	2800	4400	pF
C _{oss}	Output Capacitance	V _{DS} =-15V	-	270	-	pF
C _{rss}	Reverse Transfer Capacitance	f=1.0MHz	-	200	-	pF
R _g	Gate Resistance	f=1.0MHz	-	-	10	Ω

Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V _{SD}	Forward On Voltage ²	I _S =-1.7A, V _{GS} =0V	-	-	-1.2	V
t _{rr}	Reverse Recovery Time	I _S =-7A, V _{GS} =0V	-	20	-	ns
Q _{rr}	Reverse Recovery Charge	dI/dt=100A/μs	-	11	-	nC

Notes:

- 1.Pulse width limited by Max. junction temperature.
- 2.Pulse test
- 3.Surface mounted on 1 in² copper pad of FR4 board, t ≤10sec ; 135°C/W when mounted on min. copper pad.
4. Starting T_j=25°C, V_{DD}=-30V, L=0.1mH, R_G=25 Ω

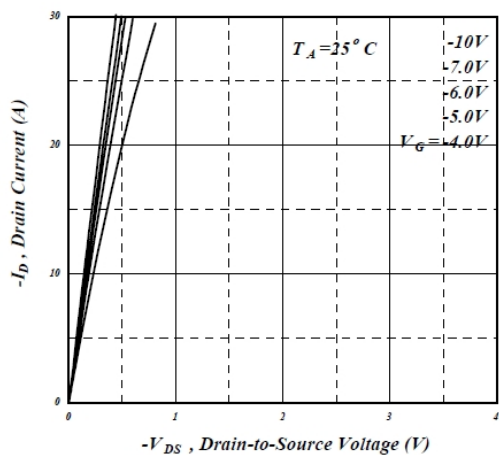


Fig 1. Typical Output Characteristics

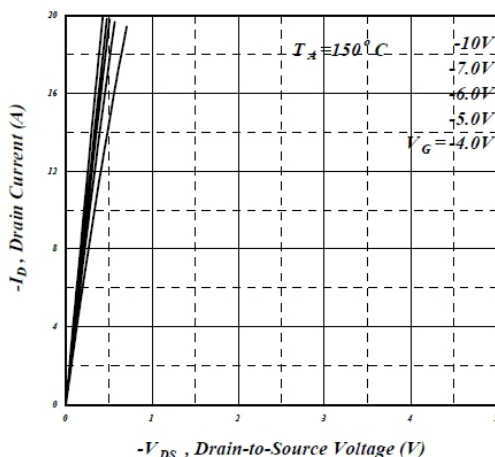


Fig 2. Typical Output Characteristics

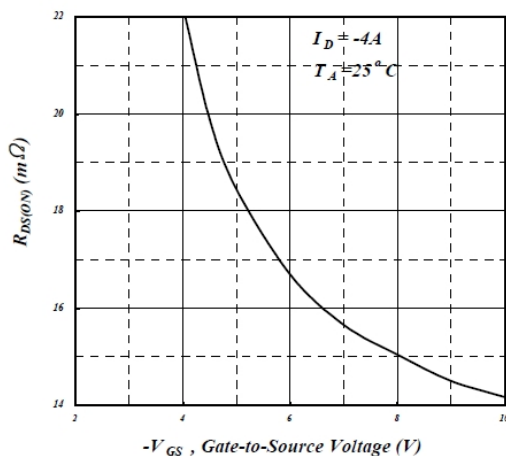


Fig 3. On-Resistance v.s. Gate Voltage

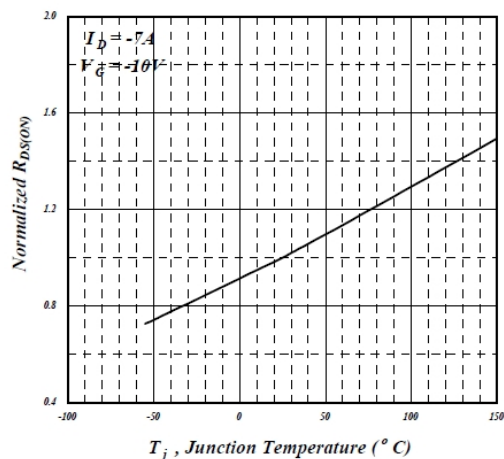


Fig 4. Normalized On-Resistance
v.s. Junction Temperature

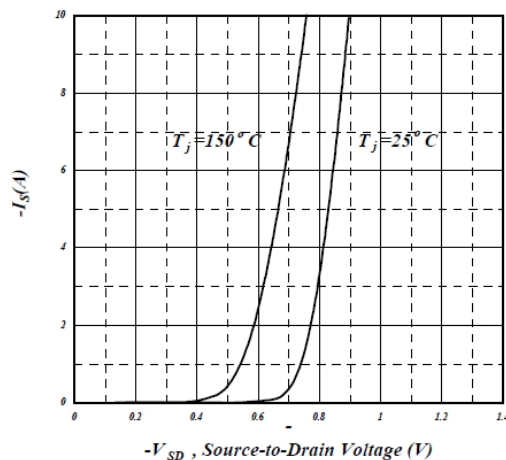


Fig 5. Forward Characteristic of
Reverse Diode

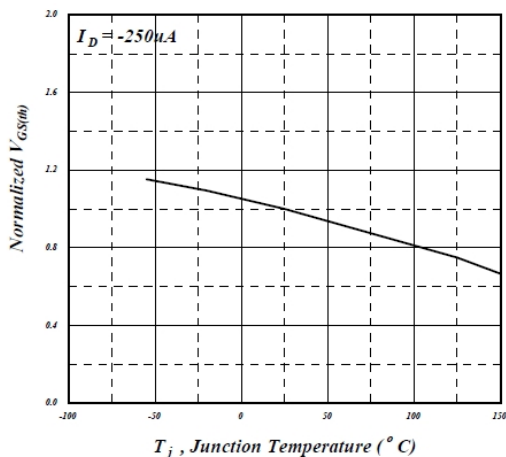


Fig 6. Gate Threshold Voltage v.s.
Junction Temperature

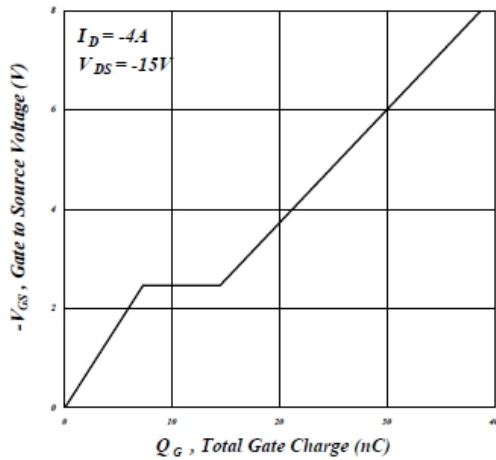


Fig 7. Gate Charge Characteristics

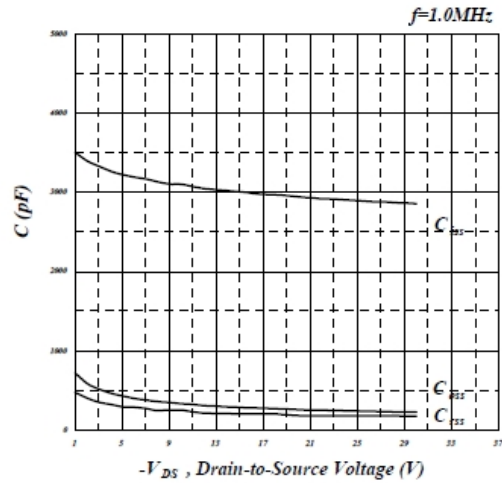


Fig 8. Typical Capacitance Characteristics

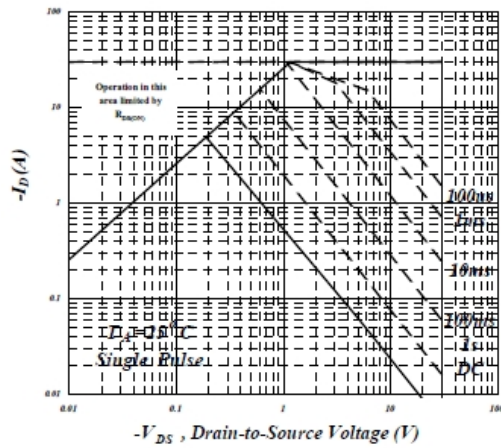


Fig 9. Maximum Safe Operating Area

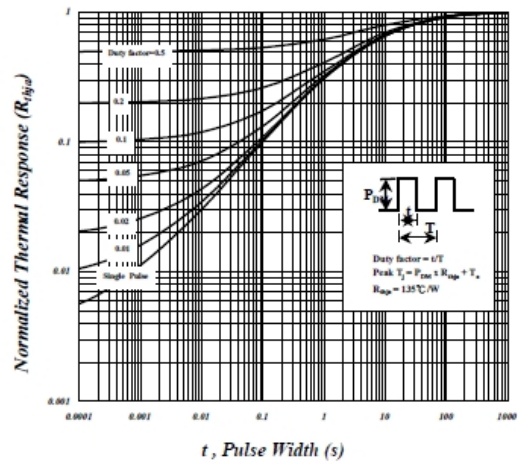


Fig 10. Effective Transient Thermal Impedance

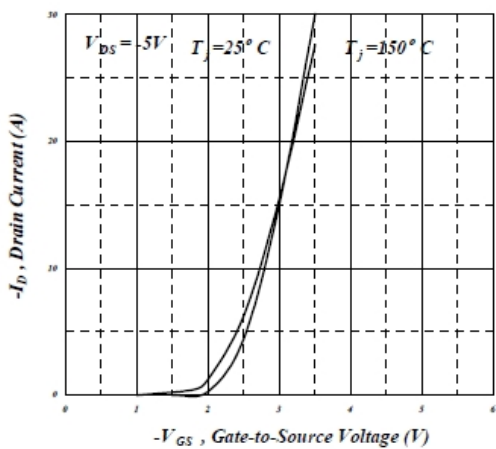


Fig 11. Transfer Characteristics

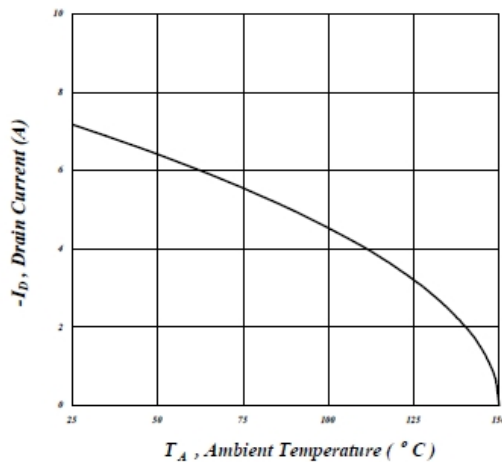


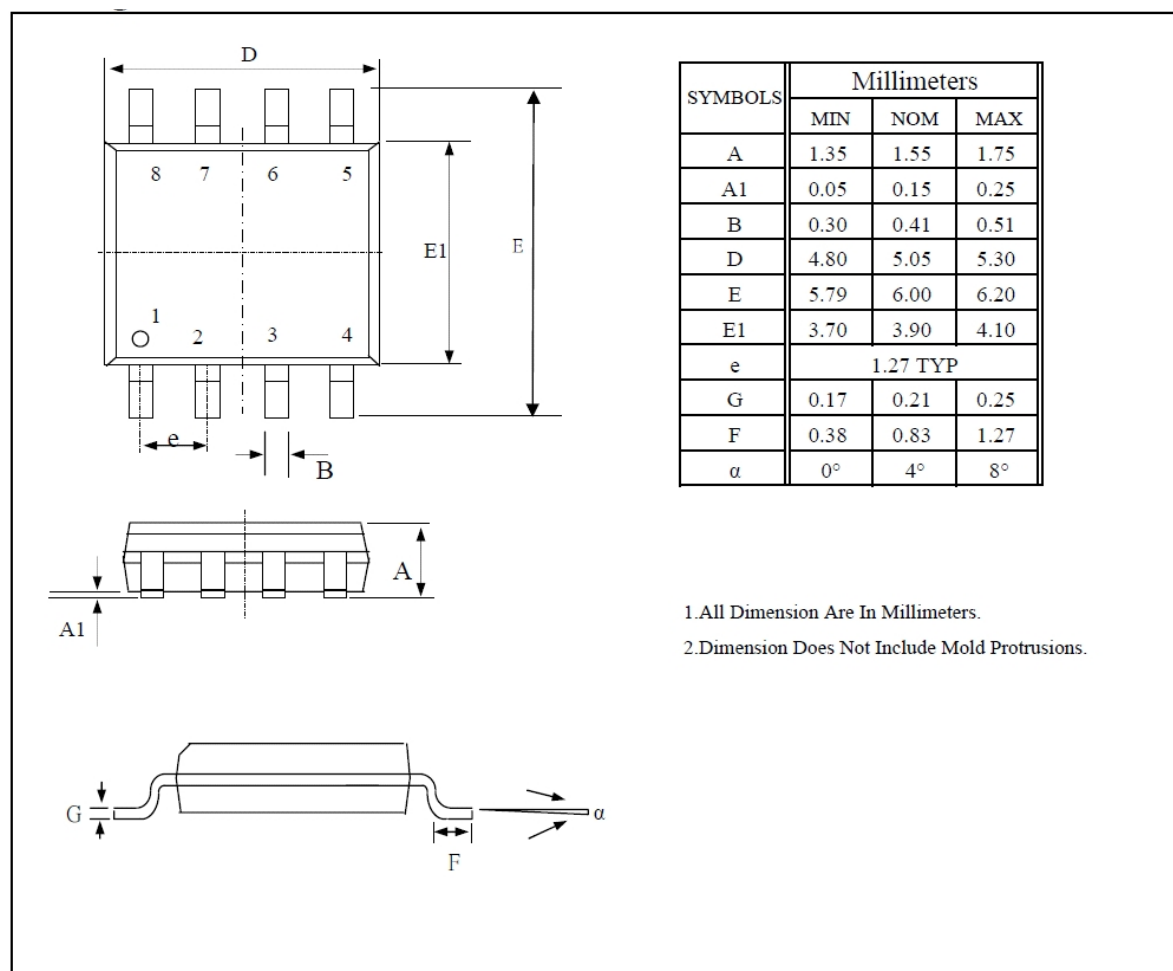
Fig 12. Drain Current v.s. Ambient
Temperature

Marking Information



Package	SOIC-8	
XXXXPP	Part Number	
Y	Year	0-9,A-Z : E=2019, F=2020
WW	Weeks	Ex.2019 -- 10/27=44weeks, 11/3=45weeks
FF	Wafer lot	
A	Serial	

Package Outline: SO-8



SO-8 FOOTPRINT:

