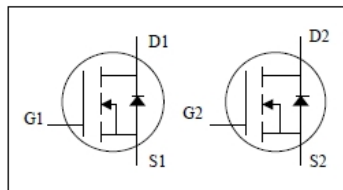
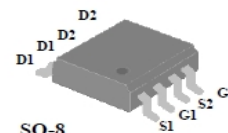


- Simple Drive Requirement
- Fast Switching Characteristic
- Low On-resistance
- RoHS Compliant & Halogen-Free



BV_{DSS}	30V
$R_{DS(ON)}$	17m Ω
I_D	7A



Description

KE9202 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	A
$I_D@T_A=70^{\circ}\text{C}$	Drain Current, $V_{GS} @ 10V_3$	5.2	A
I_{DM}	Pulsed Drain Current ¹	20	A
$P_D@T_A=25^{\circ}\text{C}$	Total Power Dissipation	2	W
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	85	$^{\circ}\text{C}/\text{W}$

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BVDSS	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	30	-	-	V
RDS(ON)	Static Drain-Source On-Resistance	VGS=10V, ID=5A	-	14	17	mΩ
		VGS=4.5V, ID=3A	-	24	29	mΩ
VGS(th)	Gate Threshold Voltage	VDS=VGS, ID=250uA	1	-	3	V
gfs	Forward Transconductance	VDS=10V, ID=5A	-	10	-	S
IDSS	Drain-Source Leakage Current	VDS=24V, VGS=0V	-	-	10	uA
IGSS	Gate-Source Leakage	VGS=±20V, VDS=0V	-	-	±100	nA
Qg	Total Gate Charge	ID=5A	-	6	9.6	nC
Qgs	Gate-Source Charge	VDS=15V	-	2	-	nC
Qgd	Gate-Drain ("Miller") Charge	VGS=4.5V	-	3	-	nC
td(on)	Turn-on Delay Time	VDS=15V	-	6	-	ns
tr	Rise Time	ID=1A	-	6	-	ns
td(off)	Turn-off Delay Time	RG=3.3Ω	-	15	-	ns
tf	Fall Time	VGS=10V	-	3.5	-	ns
Ciss	Input Capacitance	VGS=0V	-	460	740	pF
Coss	Output Capacitance	VDS=15V	-	80	-	pF
Crss	Reverse Transfer Capacitance	f=1.0MHz	-	70	-	pF
Rg	Gate Resistance	f=1.0MHz	-	1.9	-	Ω

Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V _{SD}	Forward On Voltage ²	I _s =1A, V _{GS} =0V	-	-	1.2	V
t _{rr}	Reverse Recovery Time	I _s =5A, V _{GS} =0V	-	14	-	ns
Q _{rr}	Reverse Recovery Charge	dI/dt=100A/μs	-	10	-	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.

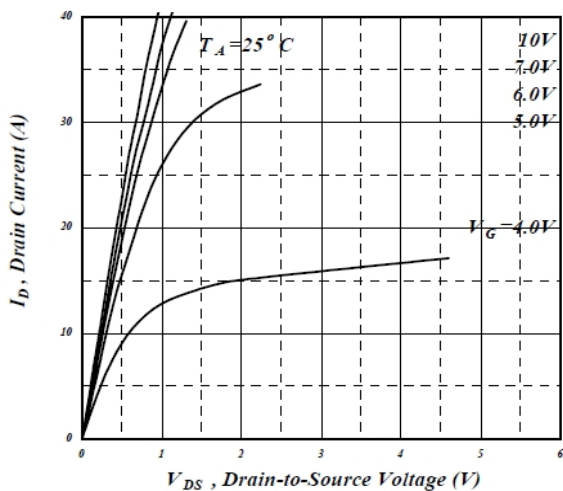


Fig 1. Typical Output Characteristics

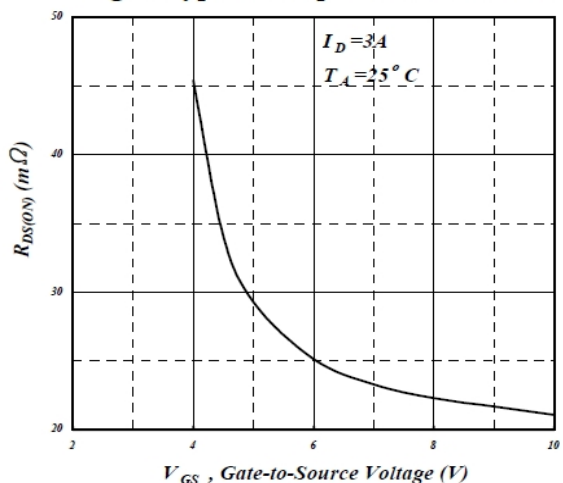


Fig 3. On-Resistance v.s. Gate Voltage

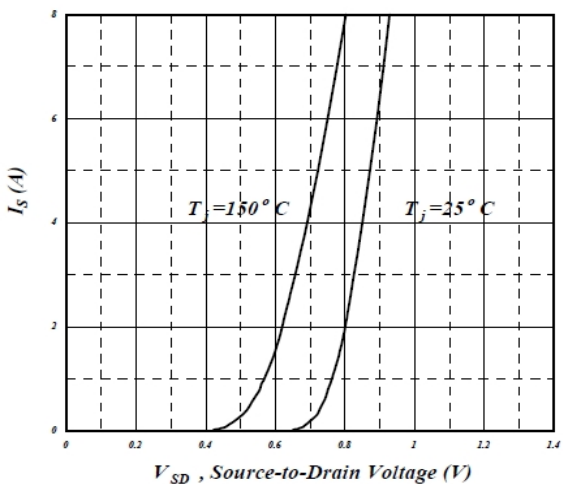


Fig 5. Forward Characteristic of Reverse Diode

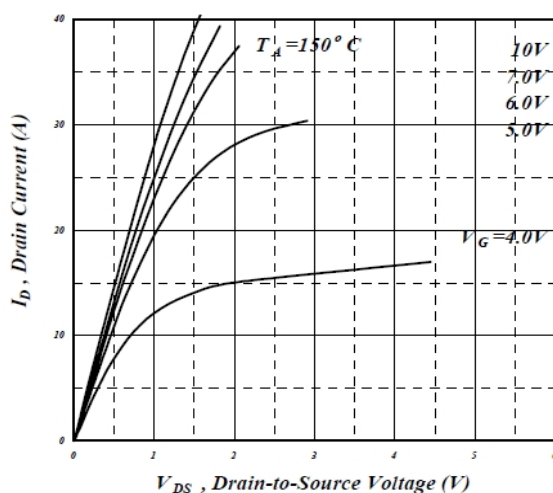


Fig 2. Typical Output Characteristics

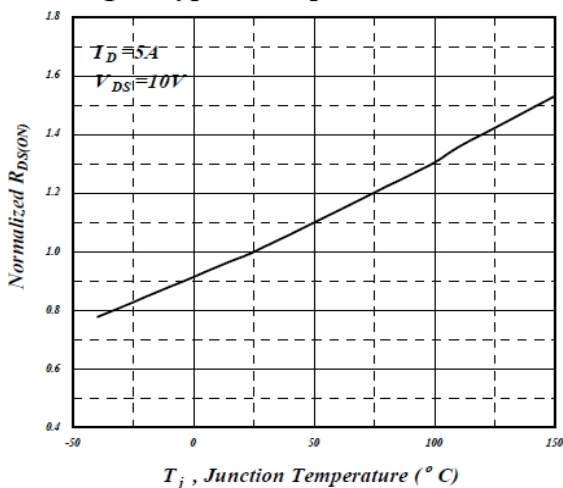


Fig 4. Normalized On-Resistance v.s. Junction Temperature

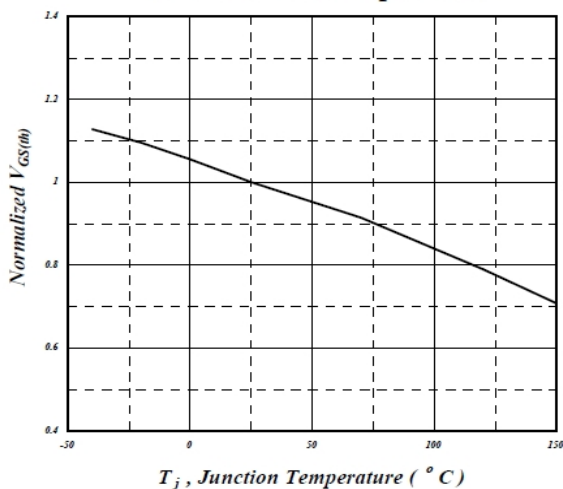


Fig 6. Gate Threshold Voltage v.s. Junction Temperature

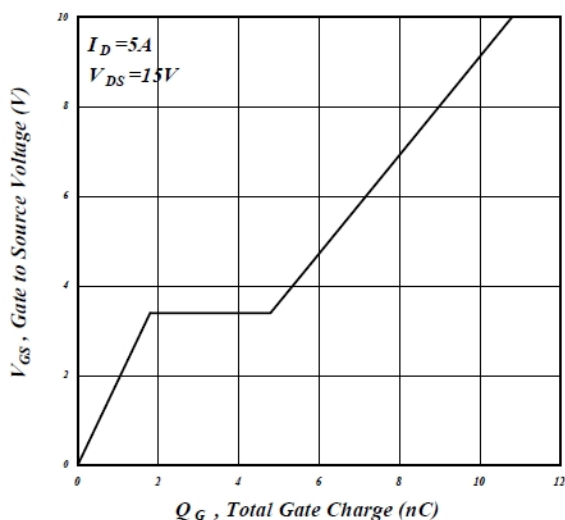


Fig 7. Gate Charge Characteristics

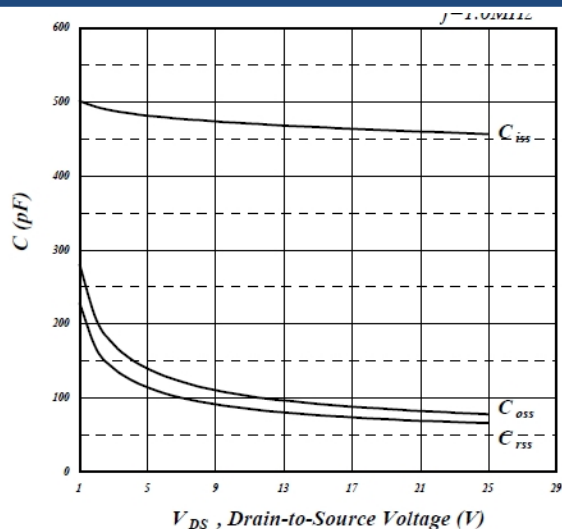


Fig 8. Typical Capacitance Characteristics

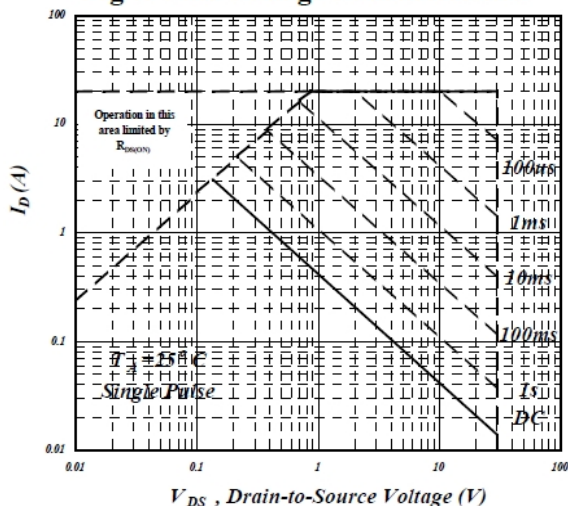


Fig 9. Maximum Safe Operating Area

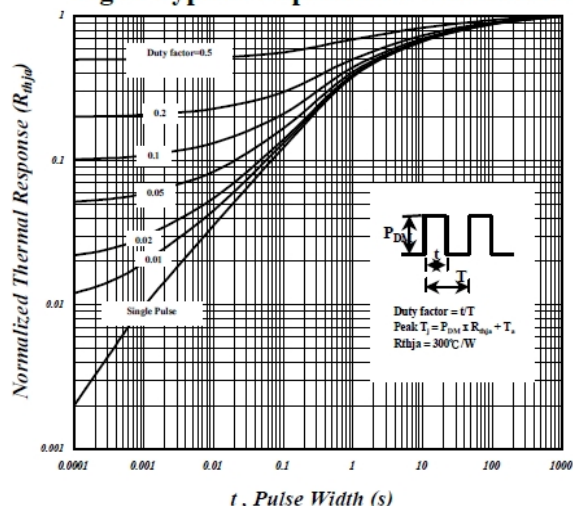


Fig 10. Effective Transient Thermal Impedance

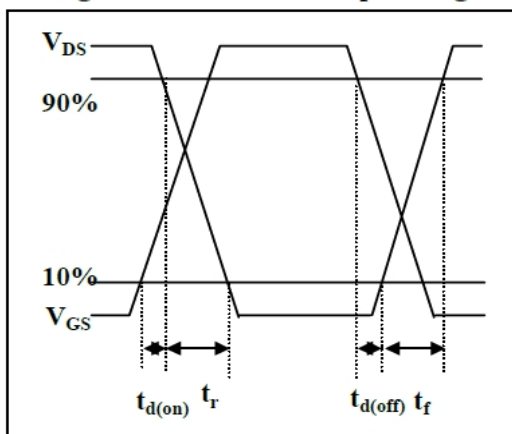


Fig 11. Switching Time Waveform

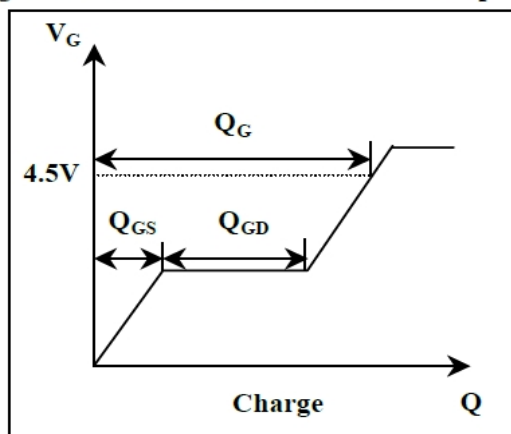


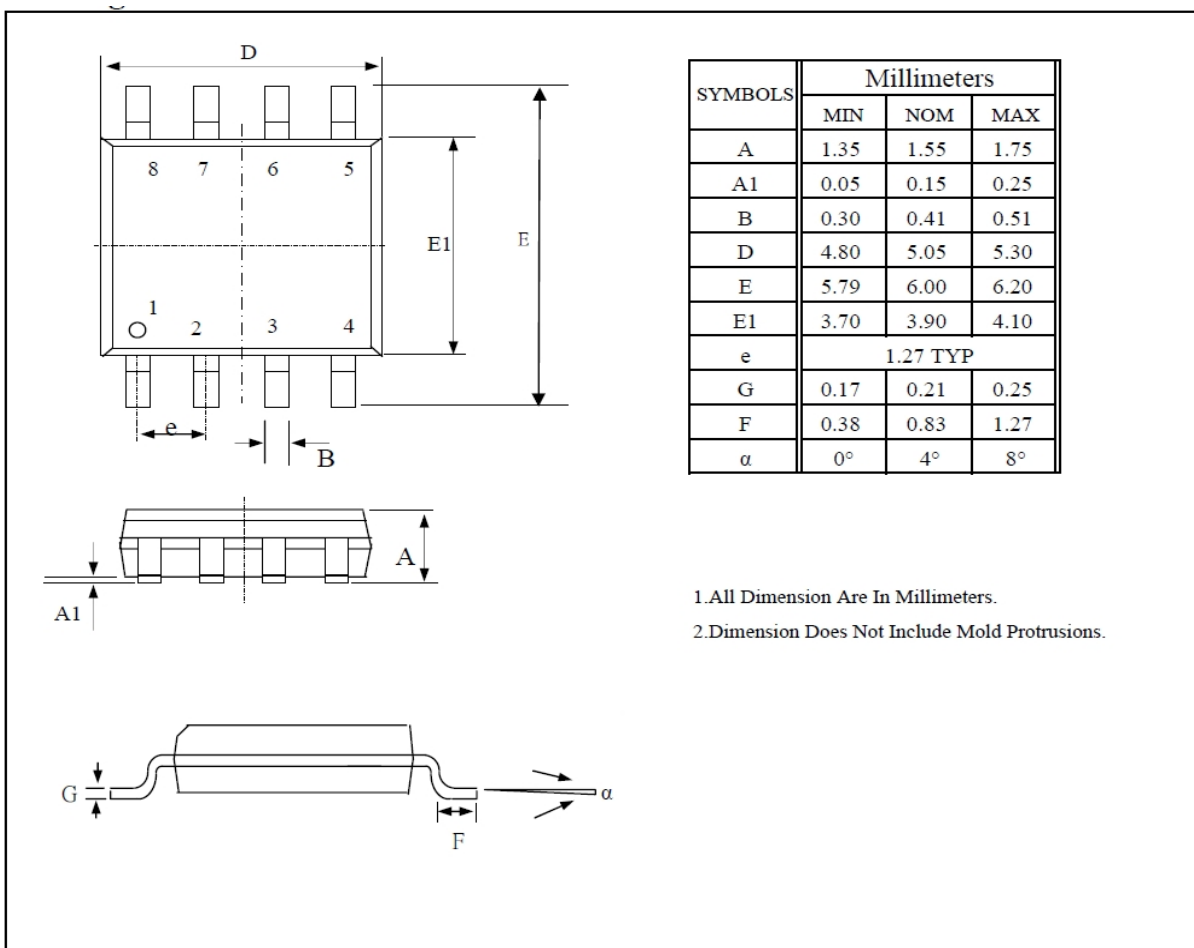
Fig 12. Gate Charge Waveform

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:

