

Kingtronics®

KT3407

P-Channel Power MOSFET

FEATURES

$$V_{DS(V)} = -30V$$

$$I_D = -4.1 A$$

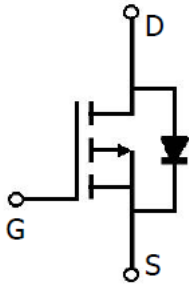
$$R_{DS(ON)} < 52m\Omega (V_{GS} = -10V)$$

$$R_{DS(ON)} < 87m\Omega (V_{GS} = -4.5V)$$

PRODUCT SUMMARY

V_{DS}	30	V
I_D	-4.1	A
$P_D(T_C=25^\circ C)$	1.4	W
$R_{DS(ON)} (V_{GS} = -10V)$	<52	m Ω
$R_{DS(ON)} (V_{GS} = -4.5V)$	<87	m Ω

Schematic Diagram (N-Channel)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

$T_C = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current *1 $T_A=25^\circ C$	-4.1	A
	Continuous Drain Current $T_A=70^\circ C$	-3.5	A
I_{DM}	Pulsed Drain Current *2	-20	A
P_D	Power Dissipation *1 $T_A=25^\circ C$	1.4	W
	Power Dissipation $T_A=70^\circ C$	1	W
R_{thJA}	Thermal Resistance.Junction-to-Ambient *1	125	$^\circ C/W$
R_{thJL}	Thermal Resistance.Junction-to-Lead *3	60	$^\circ C/W$
T_J, T_{STG}	Junction and Storage Temperature Range	-55 to 150	$^\circ C$

*1 The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ C$

*2 Repetitive rating, pulse width limited by junction temperature.

*3 The $R_{\theta JA}$ is the sum of the thermal impedance from junction to lead $R_{\theta JL}$ and lead to ambient

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RATING AND CHARACTERISTIC CURVES

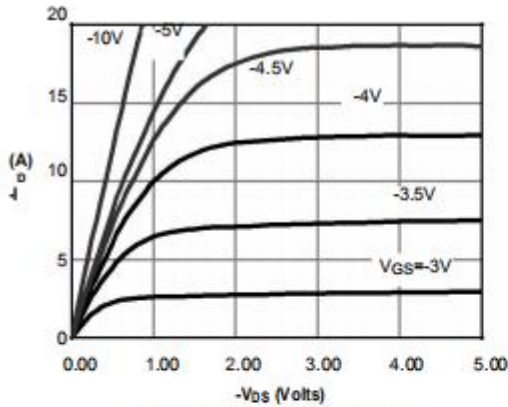


Figure 1: On-Region Characteristics

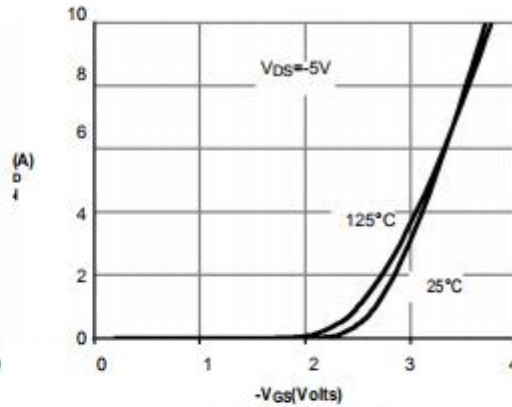


Figure 2: Transfer Characteristics

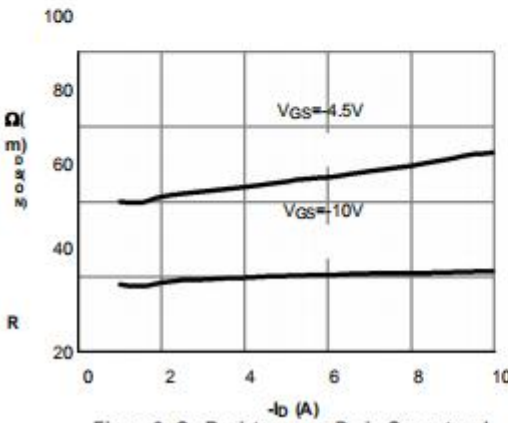


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

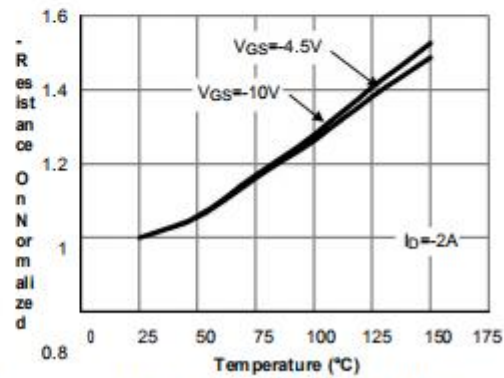


Figure 4: On-Resistance vs. Junction Temperature

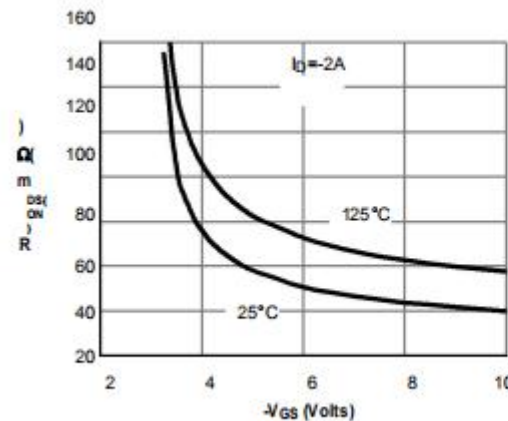


Figure 5: On-Resistance vs. Gate-Source Voltage

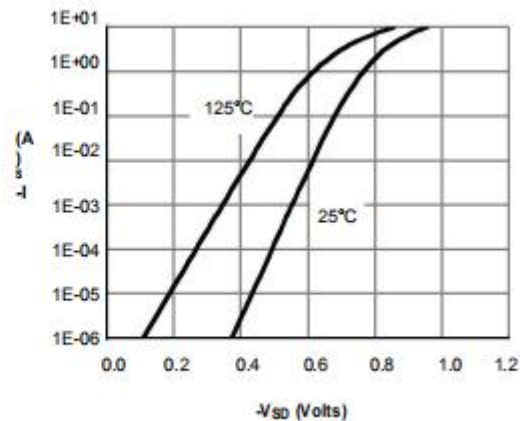


Figure 6: Body-Diode Characteristics

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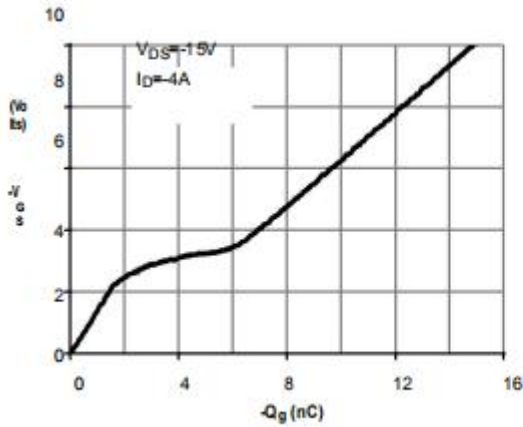


Figure 7: Gate-Charge Characteristics

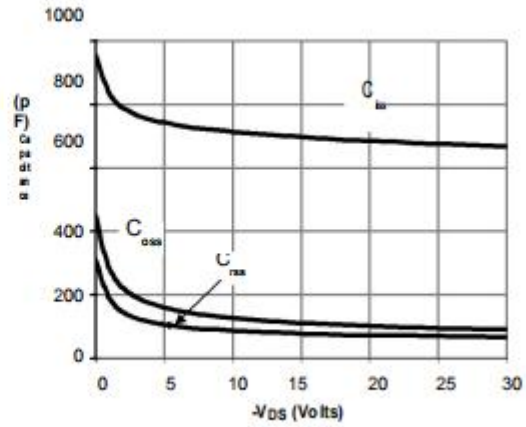


Figure 8: Capacitance Characteristics

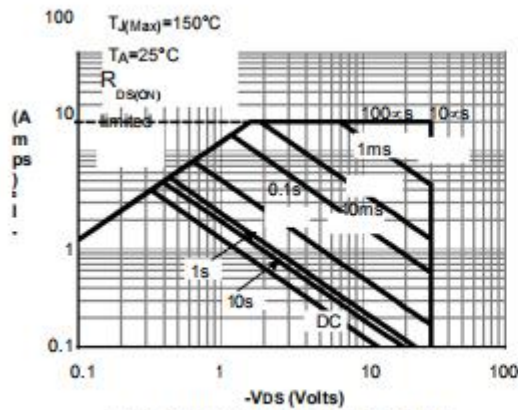


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

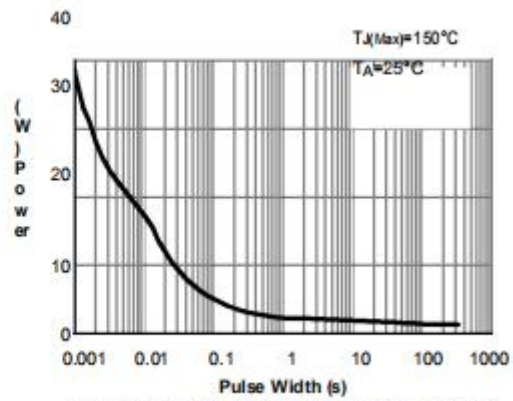


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

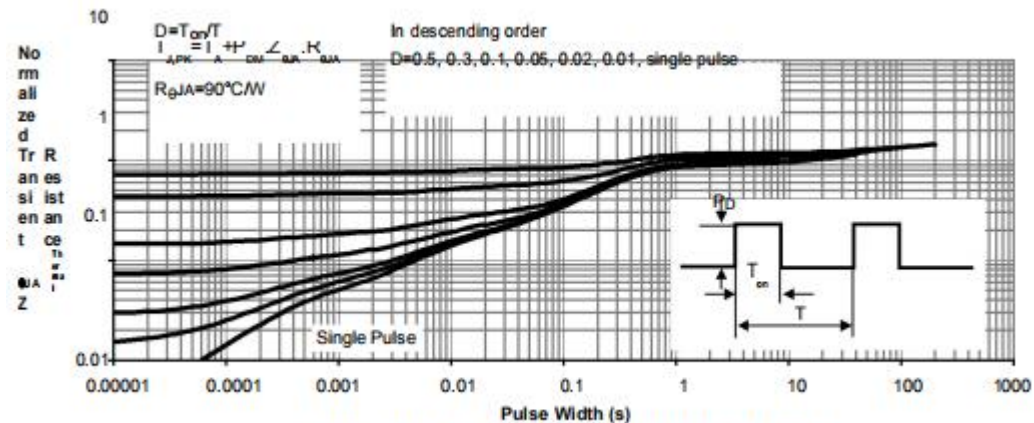


Figure 11: Normalized Maximum Transient Thermal Impedance

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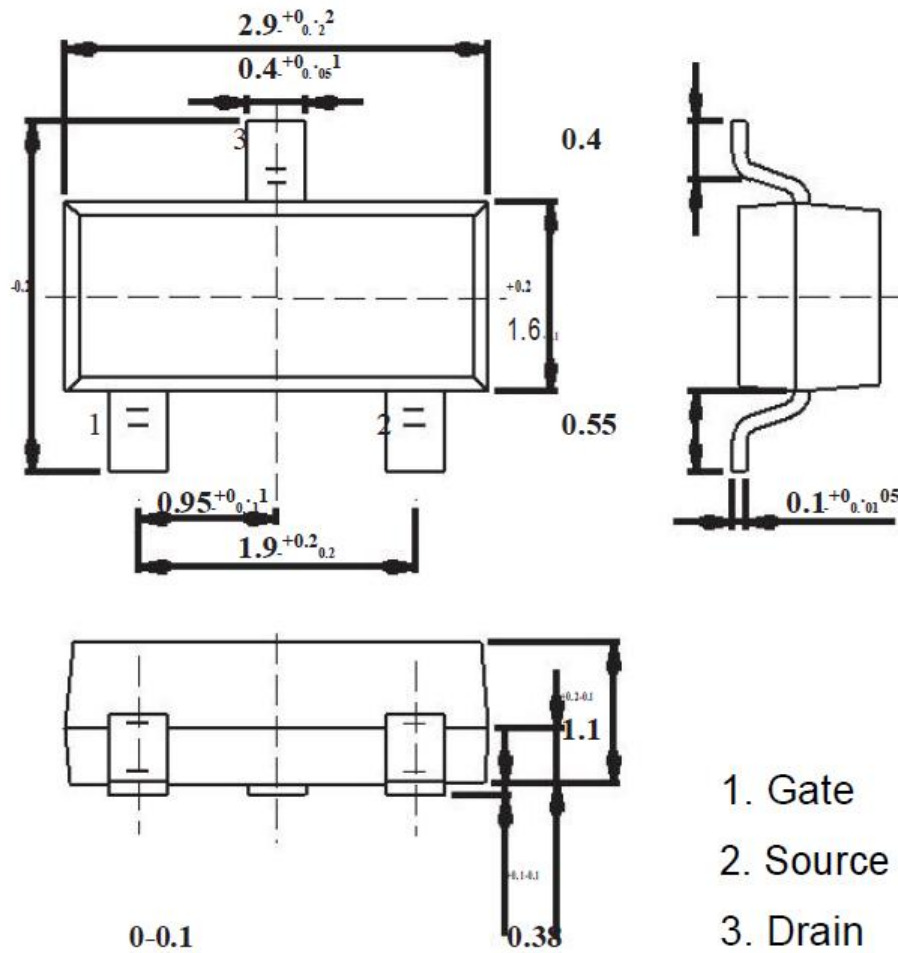
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Package Dimension

SOT-23-3

Unit: mm



Notes: Specifications are subject to change without notice.

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