

# isc N-Channel MOSFET Transistor

## 2SK610

#### D(2) **FEATURES** Drain Current –I<sub>D</sub>=3A@ T<sub>C</sub>=25 ℃ S(3) · Drain Source Voltage-PIN 1.Gate : V<sub>DSS</sub>= 400V(Min) 2.Drain 100% avalanche tested 3.Source · Minimum Lot-to-Lot variations for robust device TO-3PML package 2 3 1 performance and reliable operation DESCRIPTION • High Voltage. · High speed power switching. H ż ABSOLUTE MAXIMUM RATINGS(Ta=25°C) SYMBOL PARAMETER VALUE UNIT R VDSS Drain-Source Voltage 400 V mm MIN DIM MAX 19.90 20.10 Α VGS Gate-Source Voltage-Continuous $\pm 20$ V В 15.75 16.10 5.50 5.70 С D 0.90 1.10 3.30 F 3.50 Drain Current-Continuous 3 А $I_D$ 3.20 2.90 G 5.90 6.10 н 0.595 0.70 80 W $\mathbf{P}_{\mathsf{D}}$ Total Dissipation @Tc=25℃ 21.10 22.50 K 1.90 2.25 N 10.80 11.00 ΤJ Max. Operating Junction Temperature 150 °C 0 4.90 5.10 R 3.75 3.95 S 3.20 3.60 Storage Temperature -55~150 °C U 9.90 10.10 T<sub>stg</sub> Y 4.20 4.90 Ζ 2.10



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#### **ELECTRICAL CHARACTERISTICS**

#### $T_c=25^{\circ}C$ unless otherwise specified

SYMBO L	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA	400			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}$ = $V_{GS}$ ; $I_D$ = 1mA	1.0		5.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 2A			3.0	Ω
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0			±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 400V; V <sub>GS</sub> =0			1	μA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 3A; V <sub>GS</sub> =0			1.3	V

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