

### INCHANGE SEMICONDUCTOR

## isc N-Channel MOSFET Transistor

### **TK8P65W**

#### • FEATURES

- Drain Current  $I_D$ = 7.8A@ T<sub>C</sub>=25°C
- Drain Source Voltage-
  - : V<sub>DSS</sub>= 650V(Min)
- Static Drain-Source On-Resistance
- : R<sub>DS(on)</sub> = 0.67 Ω (Max)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

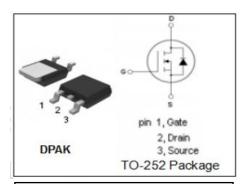
#### APPLICATIONS

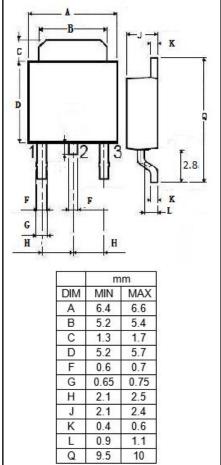
Switching power supplies, converters, AC and DC motor controls

#### ABSOLUTE MAXIMUM RATINGS(Ta=25°C) SYMBOL PARAMETER VALUE UNIT Drain-Source Voltage 650 V $V_{\text{DSS}}$ Gate-Source Voltage-Continuous V $V_{\text{GS}}$ $\pm 30$ $I_D$ **Drain Current-Continuous** 7.8 А Drain Current-Single Plused 31.2 А **I**DM Total Dissipation @Tc=25°C $\mathbf{P}_{\mathsf{D}}$ 80 W Max. Operating Junction Temperature 150 °C Τį Storage Temperature -55~150 °C Tstq

#### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	МАХ	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.56	°C/W





isc website: <u>www.iscsemi.com</u>



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#### • ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	МАХ	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 10mA	650			V
$V_{GS(th)}$	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.3A	2.5		3.5	V
Vsd	Diode Forward On-voltage	I <sub>S</sub> = 7.8A ;V <sub>GS</sub> = 0			1.7	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =3.9A			0.67	Ω
lgss	Gate-Body Leakage Current	V <sub>GS</sub> =±30V;V <sub>DS</sub> =0			±1	μA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =650V; V <sub>GS</sub> = 0			10	μA

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