

**isc N-Channel MOSFET Transistor**

**7N65**

**• FEATURES**

- Drain Current  $I_D = 7A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 650V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 1.35 \Omega (\text{Max}) @ V_{GS} = 10 V$
- Avalanche Energy Specified
- Fast Switching

**• APPLICATIONS**

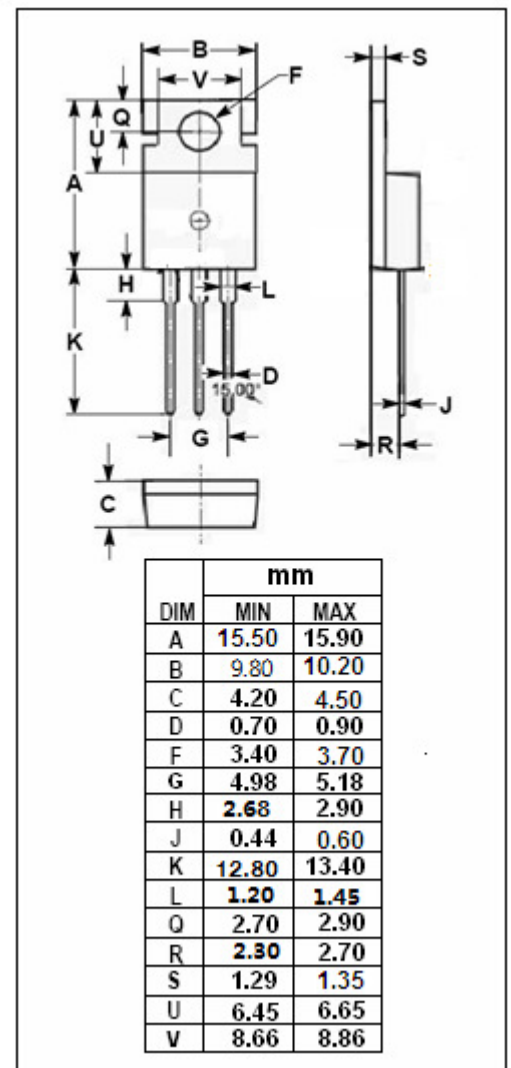
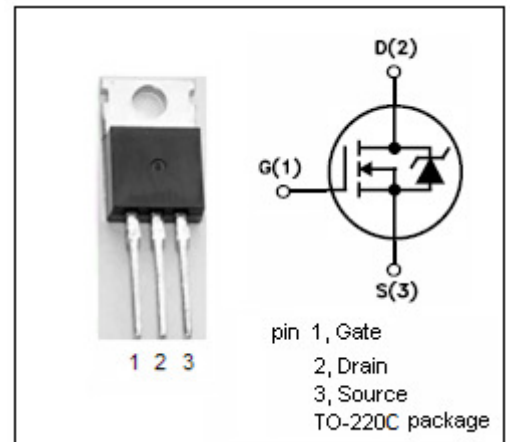
- High speed switching applications in power supplies
- PWM motor controls
- High efficient DC to DC converters and bridge circuits.

**• ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	650	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 30$	V
$I_D$	Drain Current-Continuous	7	A
$I_{DM}$	Drain Current-Single Plused	28	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	142	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.88	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



**isc N-Channel MOSFET Transistor****7N65****• ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN		MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\text{mA}$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=3.5\text{A}$			1.35	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}= \pm 30\text{V}; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=650\text{V}; V_{GS}=0$			1	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=7\text{A}; V_{GS}=0$			1.4	V
Gfs	Forward Transconductance	$V_{DS}=40\text{V}; I_D=3.5\text{A}$		8		S