

isc N-Channel MOSFET Transistor

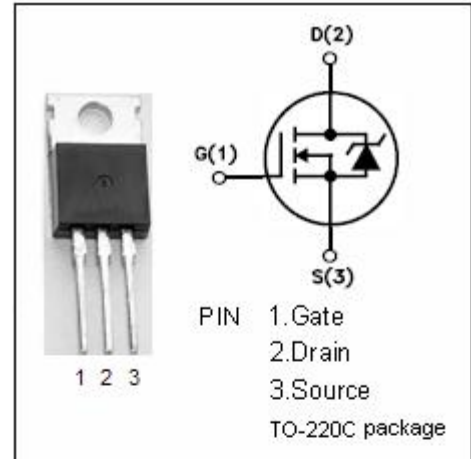
18N10

• FEATURES

- Drain Current $I_D = 18A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DSS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.14 \Omega (\text{Max})$
- Fast Switching

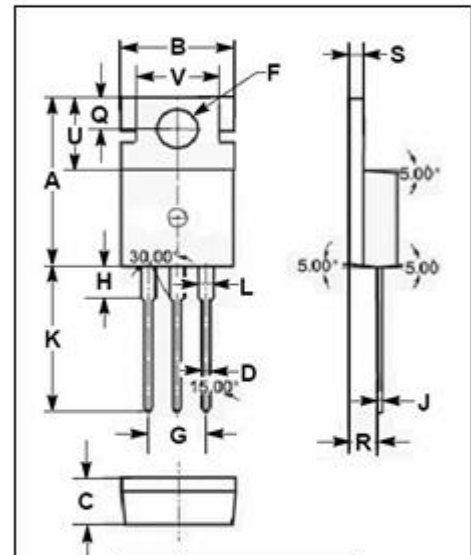
• APPLICATIONS

- Switch regulators
- Switching converters, motor drivers, relay drivers



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	18	A
I_{DM}	Drain Current-Single Plused	45	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	90	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ C/W$

isc N-Channel MOSFET Transistor**18N10****• ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D =1mA	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =250μA	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 18A ;V _{GS} = 0			1.4	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 9A			0.14	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V;V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =80V; V _{GS} = 0			1	μA
C _{iss}	Input Capacitance	V _{DS} =25V; V _{GS} =0V; f _T =1MHz			1700	pF
C _{rss}	Reverse Transfer capacitance				300	
C _{oss}	Output Capacitance				750	
t _r	Rise Time	V _{GS} =10V; I _D =9A; V _{DD} =50V; R _L =50Ω		300	450	ns
t _{d(on)}	Turn-on Delay Time			60	90	
t _f	Fall Time			150	225	
t _{d(off)}	Turn-off Delay Time			150	225	