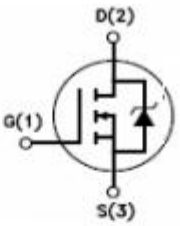
isc N-Channel MOSFET Transistor 15N12

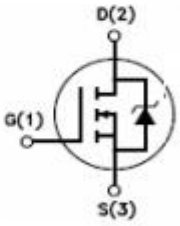
- **FEATURES**
- Drain Current I_D= 15A@ T_C=25℃
- Drain Source Voltage
  : V_{DSS}= 120V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 0.15Ω (Max)
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

TO-220C Package



PIN 1.Gate
2.Drain
3.Source

TO-3 Package



PIN 1.Gate
2.Drain
3.Source

- **APPLICATIONS**
- Switching regulators
- Switching converters,motor drivers,relay drivers.

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	120	V
V_{GS}	Gate-Source Voltage-Continuous	±30	V
I_D	Drain Current-Continuous	15	A
I_{DM}	Drain Current-Single Plused	40	A
P_D	Total Dissipation @T_C=25℃	100	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

isc N-Channel MOSFET Transistor 15N12

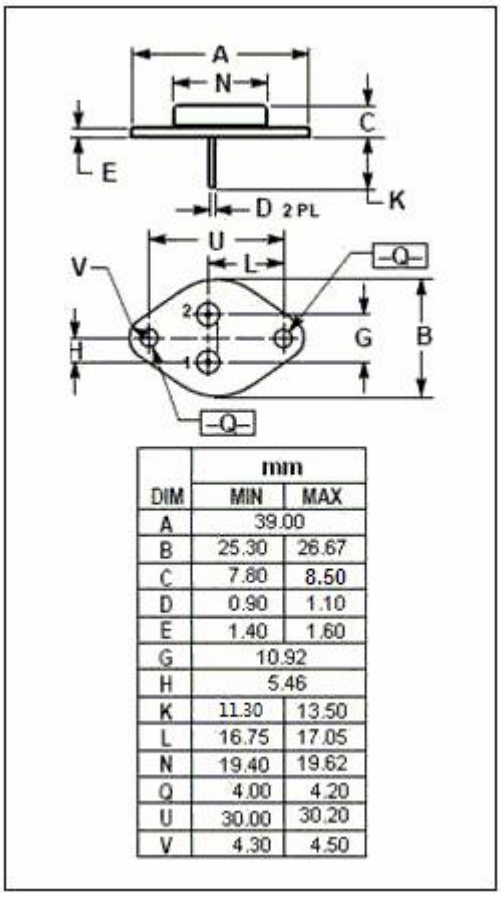
• ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

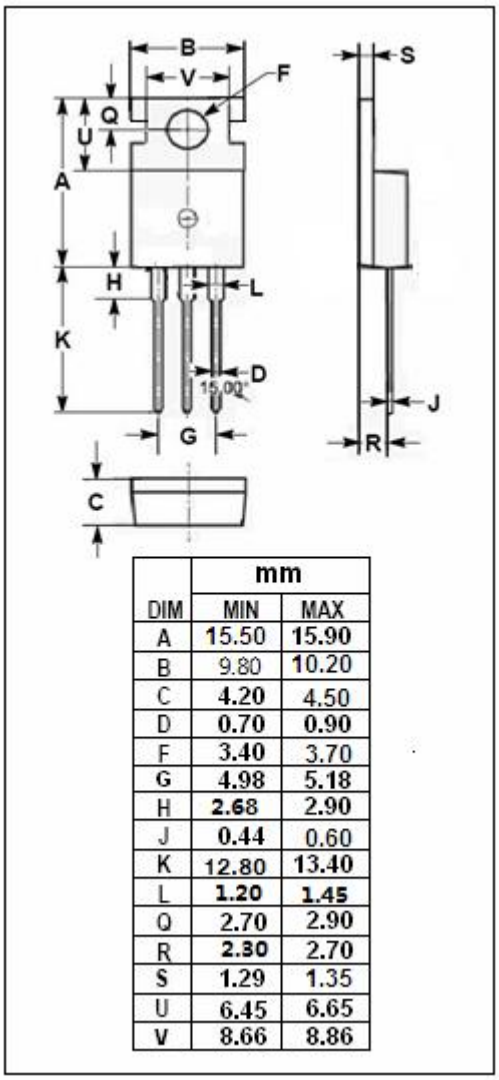
SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D=1mA	120			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=1mA	2.0		4.0	V
V_{SD}	Diode Forward On-voltage	I_S= 7.5A ;V_{GS}= 0			1.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 7.5A			0.15	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=120V; 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			350		
C_{oss}	Output Capacitance			750		
t_r	Rise Time	V_{GS}=10V; I_D=7.5A; V_{DD}=75V; R_{GS}=50Ω		150	225	ns
$t_{d(on)}$	Turn-on Delay Time			50	75	
t_f	Fall Time			125	190	
$t_{d(off)}$	Turn-off Delay Time			185	280	

isc N-Channel MOSFET Transistor 15N12

Outline Drawing



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86