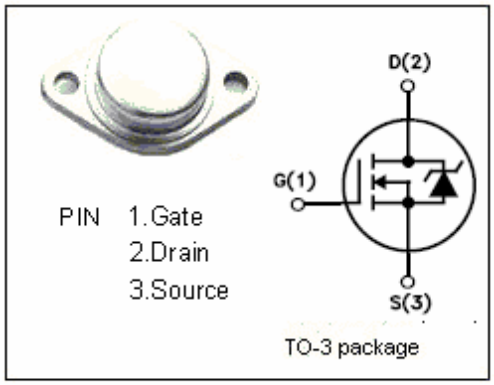
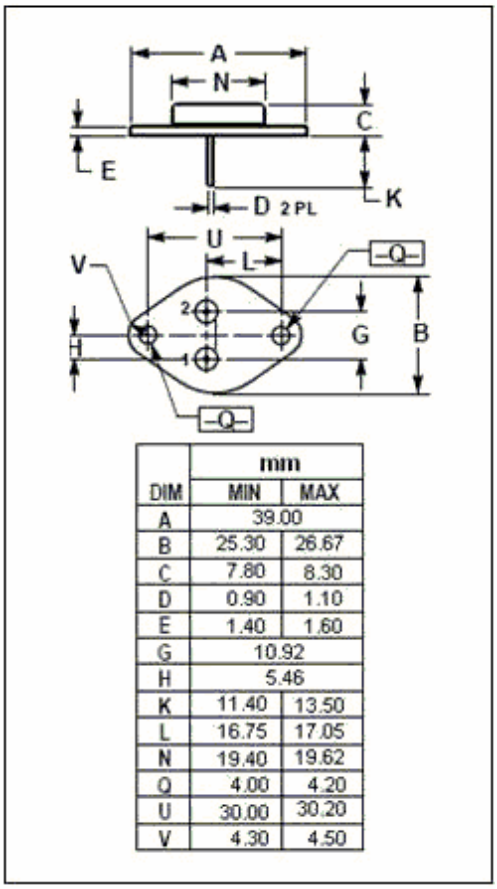
isc N-Channel MOSFET Transistor 12N90



- **FEATURES**
- Drain Current I_D= 12A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 900V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 0.95Ω (Max)
- Fast Switching

- **APPLICATIONS**
- Switch mode power supply
- DC-DC converters
- AC motor control



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	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

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	900	V
V_{GS}	Gate-Source Voltage-Continuous	±30	V
I_D	Drain Current-Continuous	12	A
I_{DM}	Drain Current-Single Plused	48	A
P_D	Total Dissipation @T_C=25℃	225	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

isc N-Channel MOSFET Transistor 12N90

• 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=250μA	900			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= 12A ;V_{GS}= 0			1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 6A			0.95	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=720V; V_{GS}= 0			250	μA
C_{iss}	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		4200		pF
C_{rss}	Reverse Transfer capacitance			90		
C_{oss}	Output Capacitance			315		
t_r	Rise Time	V_{GS}=10V; I_D=6A; V_{DD}=450V; R_{GS}=2Ω		12	50	ns
$t_{d(on)}$	Turn-on Delay Time			18	50	
t_f	Fall Time			18	50	
$t_{d(off)}$	Turn-off Delay Time			51	100	

•