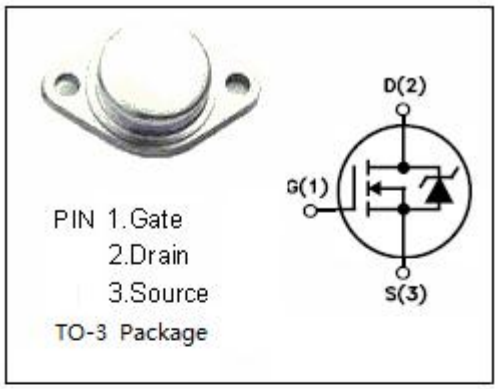
isc N-Channel MOSFET Transistor 45N05

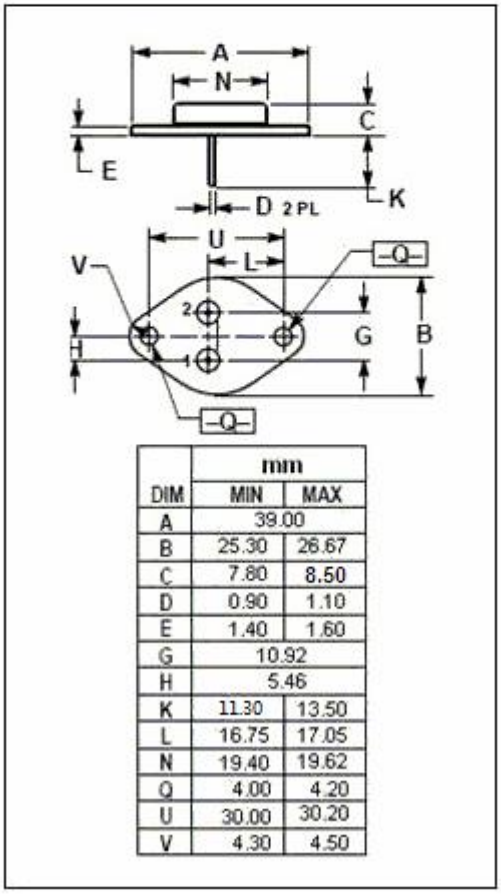
- **FEATURES**
- Drain Current I_D= 45A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 50V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 0.04 Ω (Max)
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



- **APPLICATIONS**
- Switching power supplies,converters,AC and DC motor controls

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	50	V
V_{GS}	Gate-Source Voltage-Continuous	±30	V
I_D	Drain Current-Continuous	45	A
I_{DM}	Drain Current-Single Plused	100	A
P_D	Total Dissipation @T_C=25℃	150	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃



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

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.63	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	62.5	℃/W

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• 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	50			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= 22.5A ;V_{GS}= 0			1.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 22.5A			0.04	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=40V; V_{GS}= 0			1	μA
C_{iss}	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz			3000	pF
C_{rss}	Reverse Transfer capacitance				750	
C_{oss}	Output Capacitance				1800	