

isc N-Channel MOSFET Transistor

14N05

• FEATURES

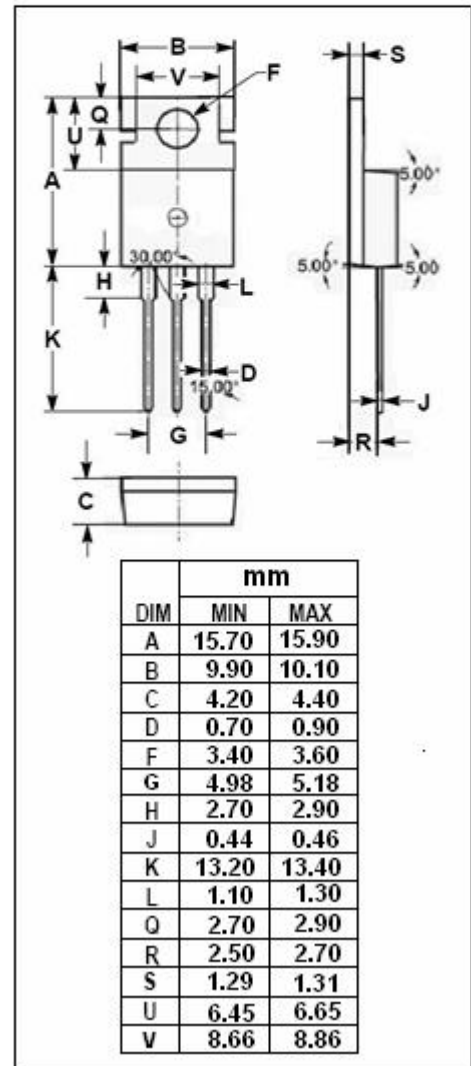
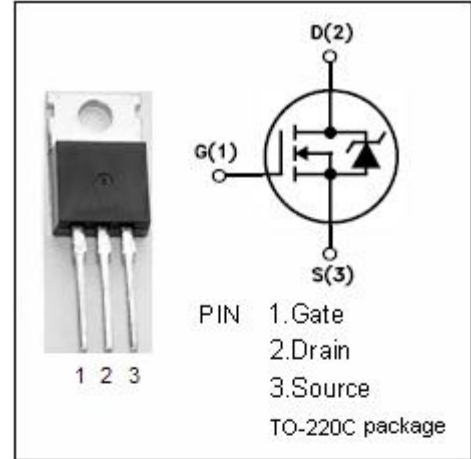
- Drain Current $I_D = 14A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 50V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.1 \Omega (Max)$
- Fast Switching

• APPLICATIONS

- Switch regulators
- Switching converters motor drivers and relay drivers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	50	V
V_{GS}	Gate-Source Voltage-Continuous	± 10	V
I_D	Drain Current-Continuous	14	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	48	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$



isc N-Channel MOSFET Transistor**14N05****• 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 =250μA	50			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 = 14A ;V _{GS} = 0			1.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 14A			0.1	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ± 10V;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		670		pF
C _{rss}	Reverse Transfer capacitance			50		
C _{oss}	Output Capacitance			185		
t _r	Rise Time	V _{GS} =10V; R _{GS} =0.6 Ω I _D =7A; V _{DD} =25V; R _L =3.57 Ω		24		ns
t _{d(on)}	Turn-on Delay Time			13		
t _f	Fall Time			16		
t _{d(off)}	Turn-off Delay Time			42		