

INCHANGE SEMICONDUCTOR

Isc N-Channel MOSFET Transistor

IPA041N04N

FEATURES

- With TO-220F package
- · Low input capacitance and gate charge
- · Low gate input resistance
- Reduced switching and conduction losses
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

Switching applications

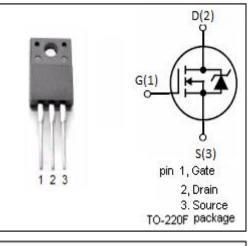
ABSOLUTE MAXIMUM RATINGS(Ta=25 C)						
SYMBOL	PARAMETER	VALUE	UNIT			
V _{DSS}	Drain-Source Voltage	V				
V _{GSS}	Gate-Source Voltage	±20	V			
ID	Drain Current-Continuous @Tc=25℃ (V _{GS} at 10V) Tc=100℃	70 49	A			
I _{DM}	Drain Current-Single Pulsed	280	A			
PD	Total Dissipation @Tc=25°C	35	W			
Tj	Max. Operating Junction Temperature	175	°C			
T _{stg}	Storage Temperature	-55~175	°C			

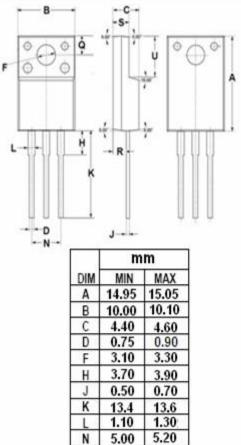
ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	4.3	°C /W	
Rth(ch-a)	Channel-to-ambient thermal resistance	62	°C/W	

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2.70

2.20

6.40

Q

R

5

2.90

2.40

2.90

6.60



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ELECTRICAL CHARACTERISTICS

$T_{C}\text{=}25^{\circ}\!\!\!\mathrm{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =1mA	40			V
V _{GS} (th)	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =0.045mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =70A		3.5	4.1	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V;V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 40V; V _{GS} = 0V;Tj=25℃ V _{DS} = 40V; V _{GS} = 0V; Tj=125℃			1 100	μA
V _{SDF}	Diode forward voltage	I _{SD} =29A, V _{GS} = 0 V			1.2	V

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