

# isc N-Channel MOSFET Transistor

## FDP8D5N10C

#### • FEATURES

- · With TO-220 packaging
- · High speed switching
- Low gate input resistance
- · Standard level gate drive
- · Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Power supply
- Switching applications

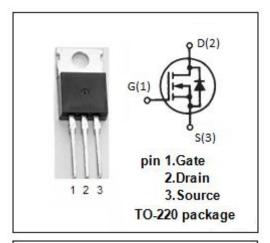


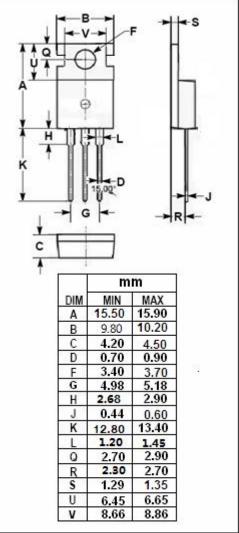
### ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	100	V
V <sub>GSS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous;@Tc=25℃ Tc=100℃	76 54	А
I <sub>DM</sub>	Drain Current-Single Pulsed	304	Α
$P_{D}$	Total Dissipation	107	W
T <sub>j</sub>	Operating Junction Temperature 175		${\mathbb C}$
T <sub>stg</sub>	Storage Temperature -55~175		$^{\circ}$

#### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	1.4	°C/W







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#### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =130uA	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =76A			8.5	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> =±20V;V <sub>DS</sub> = 0V			±0.1	μА
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 80V; V <sub>GS</sub> = 0V V <sub>DS</sub> = 80V; V <sub>GS</sub> = 0V;T <sub>J</sub> =150°C			1 500	μА
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =76A, V <sub>GS</sub> = 0 V			1.3	V

#### **NOTICE:**

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