

# Isc N-Channel MOSFET Transistor

# STF5N80K5

### • FEATURES

- Ultra-low gate charge
- Zener-protected
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • APPLICATIONS

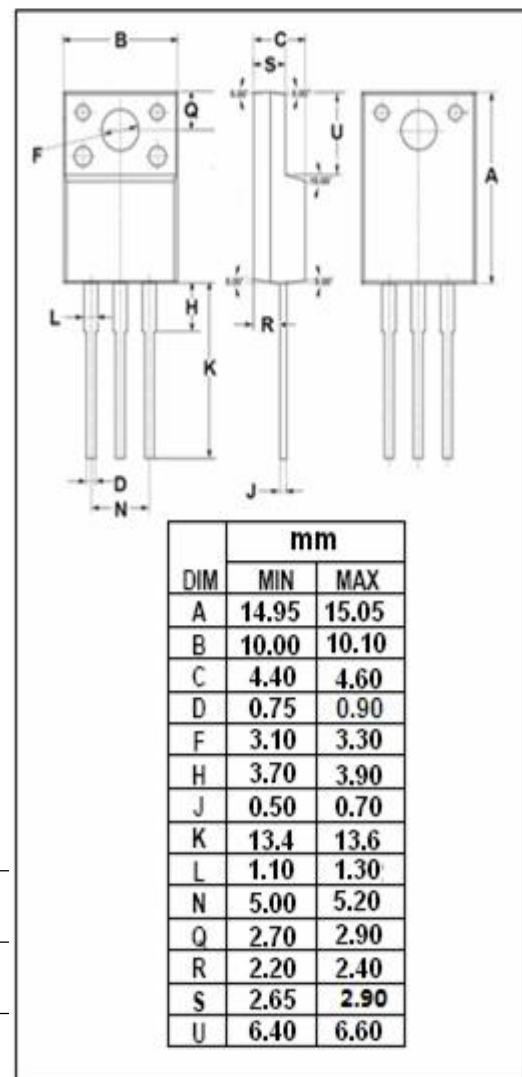
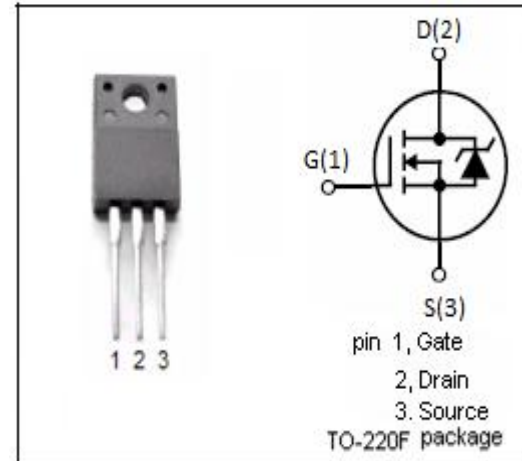
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	800	V
V <sub>GSS</sub>	Gate-Source Voltage	±30	V
I <sub>D</sub>	Drain Current-Continuous@T <sub>c</sub> =25°C T <sub>c</sub> =100°C	4 2.3	A
I <sub>DM</sub>	Drain Current-Single Pulsed	16	A
P <sub>D</sub>	Total Dissipation	20	W
T <sub>j</sub>	Operating Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	6.25	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	62.5	°C/W



**Isc N-Channel MOSFET Transistor****STF5N80K5****ELECTRICAL CHARACTERISTICS**T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 1mA	800			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =±30V; I <sub>D</sub> =0.1mA	3		5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =2A		1.50	1.75	Ω
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			± 10	μ A
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 800V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C T <sub>J</sub> =125°C			1 50	μ A
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =4A, V <sub>GS</sub> = 0 V			1.6	V

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