

# Isc N-Channel MOSFET Transistor

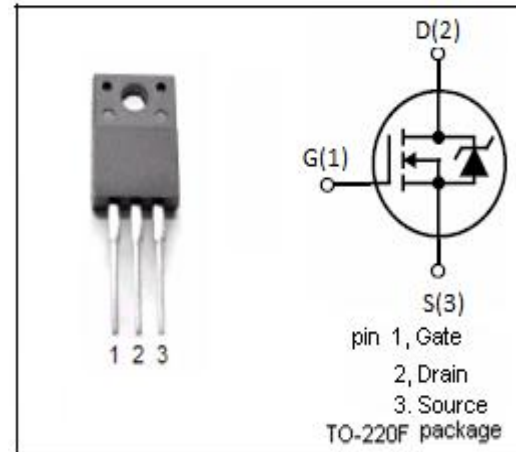
# FCPF125N65S3

### • FEATURES

- With To-220F package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

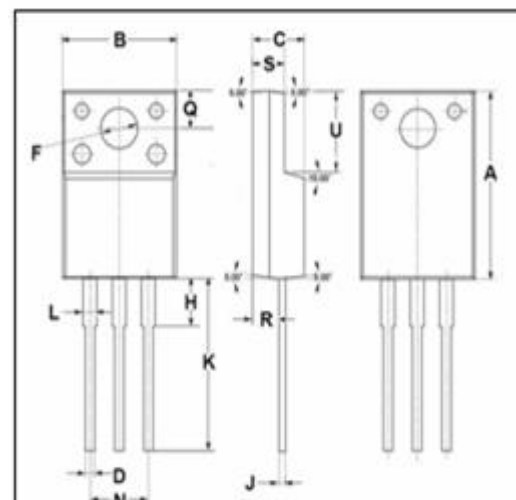
### • APPLICATIONS

- Switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	650	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	24 15	A
I <sub>DM</sub>	Drain Current-Single Pulsed	60	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	38	W
T <sub>ch</sub>	Max. Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	3.24	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	62.5	°C/W

**Isc N-Channel MOSFET Transistor**
**FCPF125N65S3**
**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	650			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = ±30V; I <sub>D</sub> =2.4mA	2.5		4.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =12A		105	125	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = 650V; V <sub>GS</sub> = 0V			1	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =12A, V <sub>GS</sub> = 0 V			1.2	V

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