

# Isc N-Channel MOSFET Transistor

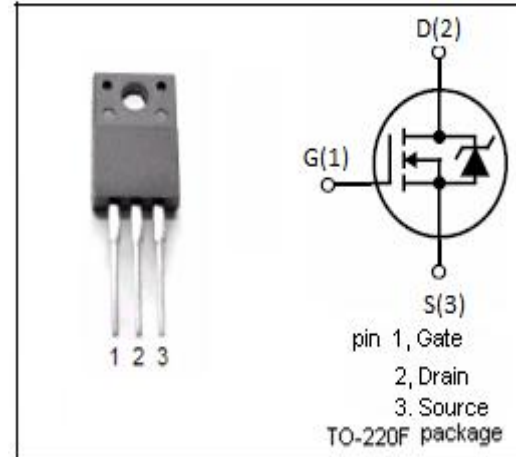
# IPA60R1K0CE

### • FEATURES

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

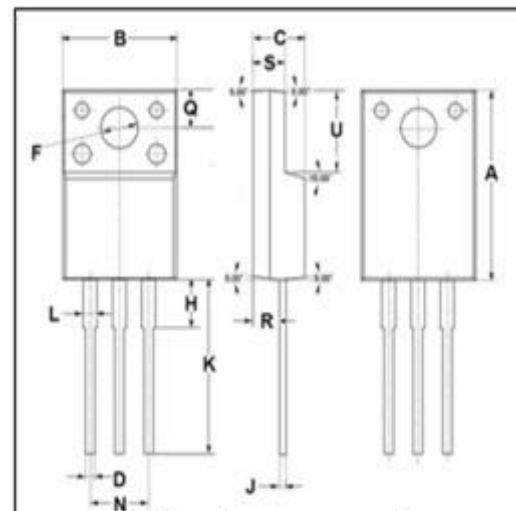
### • APPLICATIONS

- Switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	600	V
V <sub>GSS</sub>	Gate-Source Voltage	±30	V
I <sub>D</sub>	Drain Current-Continuous @T <sub>c</sub> =25°C (V <sub>GS</sub> at 10V) T <sub>c</sub> =100°C	6.8 4.3	A
I <sub>DM</sub>	Drain Current-Single Pulsed	12	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	26	W
T <sub>j</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	4.9	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	80	°C/W

**Isc N-Channel MOSFET Transistor****IPA60R1K0CE****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.13mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=1.5A$		860	1000	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.1$	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}=0V; T_J=25^\circ\text{C}$ $V_{DS}=600V; V_{GS}=0V; T_J=150^\circ\text{C}$			1 100	$\mu A$
$V_{SDF}$	Diode forward voltage	$I_{SD}=1.9A, V_{GS}=0V$		0.9		V

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