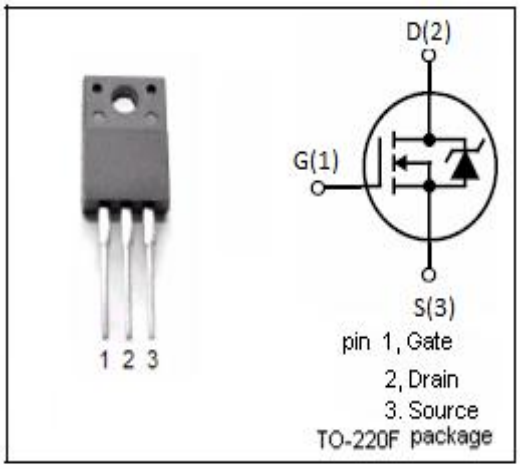
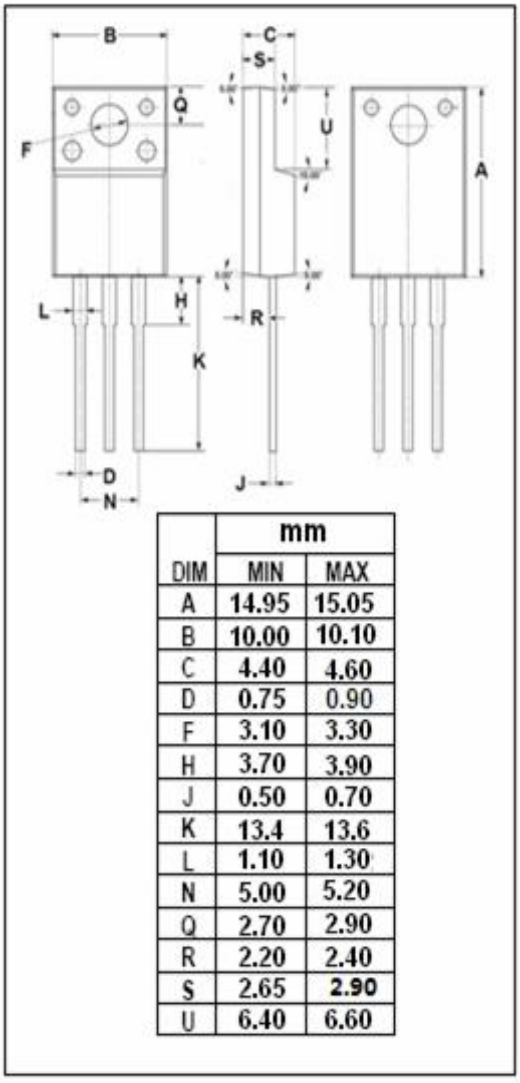
Isc N-Channel MOSFET Transistor IPA65R110CFD



- **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



DIM	mm MIN	mm 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

- **ABSOLUTE MAXIMUM RATINGS(T_a=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	650	V
V_{GSS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous @Tc=25℃ Tc=100℃	31.2 19.7	A
I_{DM}	Drain Current-Single Pulsed	99.6	A
P_D	Total Dissipation @T_C=25℃	277.8	W
T_{ch}	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

- **THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
Rth(ch-c)	Channel-to-case thermal resistance	3.6	℃/W
Rth(ch-a)	Channel-to-ambient thermal resistance	80	℃/W

Isc N-Channel MOSFET Transistor IPA65R110CFD

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V; I_D=1mA	650			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= ±20V; I_D=1.3mA	3.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=12.7A		99	110	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= ±20V;V_{DS}= 0V			±0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}= 600V; V_{GS}= 0V;Tj=25℃ V_{DS}= 600V; V_{GS}= 0V; Tj=150℃			1.5 400	μA
V_{SDF}	Diode forward voltage	I_{SD}=19.1A, V_{GS} = 0 V		0.9		V