

isc N-Channel MOSFET Transistor

IPA65R310CFD

• FEATURES

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

• APPLICATIONS

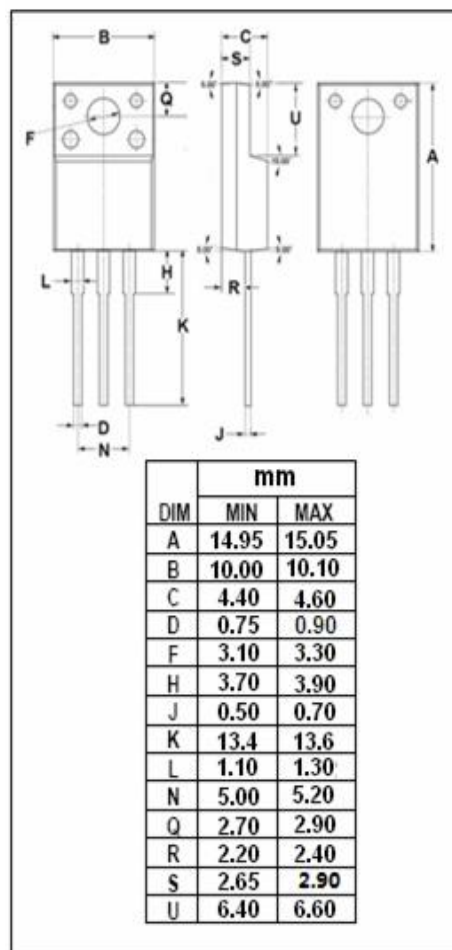
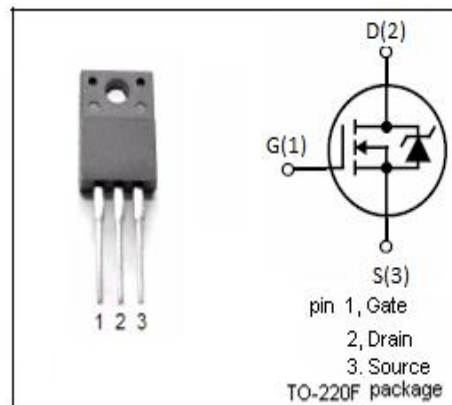
- Switching applications

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous @ $T_c=25^\circ\text{C}$ (V_{GS} at 10V) $T_c=100^\circ\text{C}$	11.4 7.2	A
I_{DM}	Drain Current-Single Pulsed	34.4	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	32	W
T_j	Max. Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.9	$^\circ\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^\circ\text{C}/\text{W}$



Isc N-Channel MOSFET Transistor**IPA65R310CFD****• ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =1mA	650			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =0.4mA	3.5	4	4.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =4.4A		0.28	0.31	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 650V; V _{GS} = 0V; T _j =25°C V _{DS} =650V; V _{GS} = 0V; T _j =150°C		150	1	μ A
V _{SDF}	Diode forward voltage	I _{SD} =6.6A, V _{GS} = 0 V		0.9		V

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