

isc N-Channel MOSFET Transistor

IPA65R650CE

• FEATURES

- With TO-220F packaging
- High speed switching
- Very high commutation ruggedness
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operationz

• APPLICATIONS

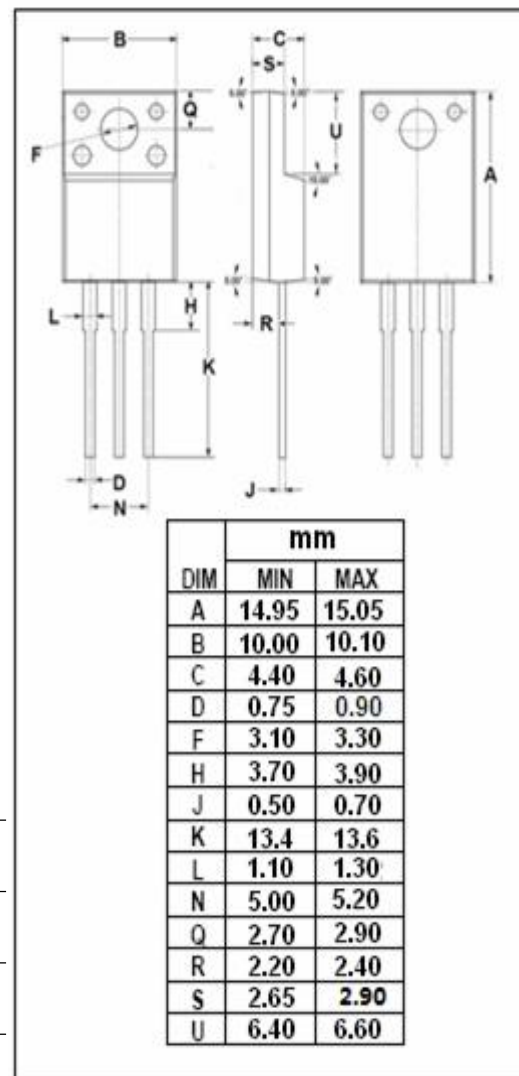
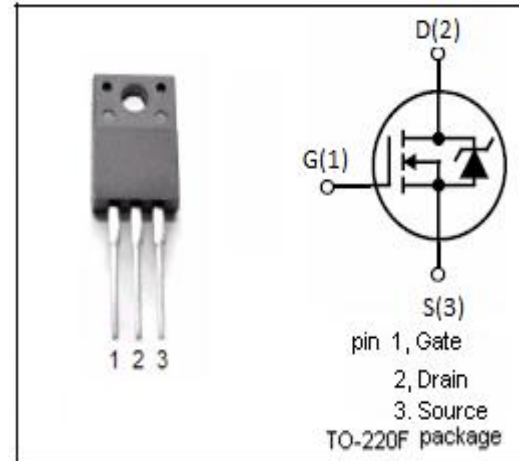
- PFC stages, hard switching PWM stages and resonant switching
- PC Silverbox, Adapter, LCD & PDP TV
- Lighting, Server, Telecom and UPS

• 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@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	10.1 6.4	A
I_{DM}	Drain Current-Single Pulsed	18	A
P_D	Total Dissipation	28	W
T_j	Operating Junction Temperature	-40~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-40~150	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	4.5	$^{\circ}\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^{\circ}\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C 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 =0.21mA	2.5		3.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =2.1A		540	650	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 650V; V _{GS} = 0V			1	μA
V _{SDF}	Diode forward voltage	I _{SD} =3.2A, V _{GS} = 0 V		0.9		V

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