

Isc N-Channel MOSFET Transistor

IPA60R165CP

• 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

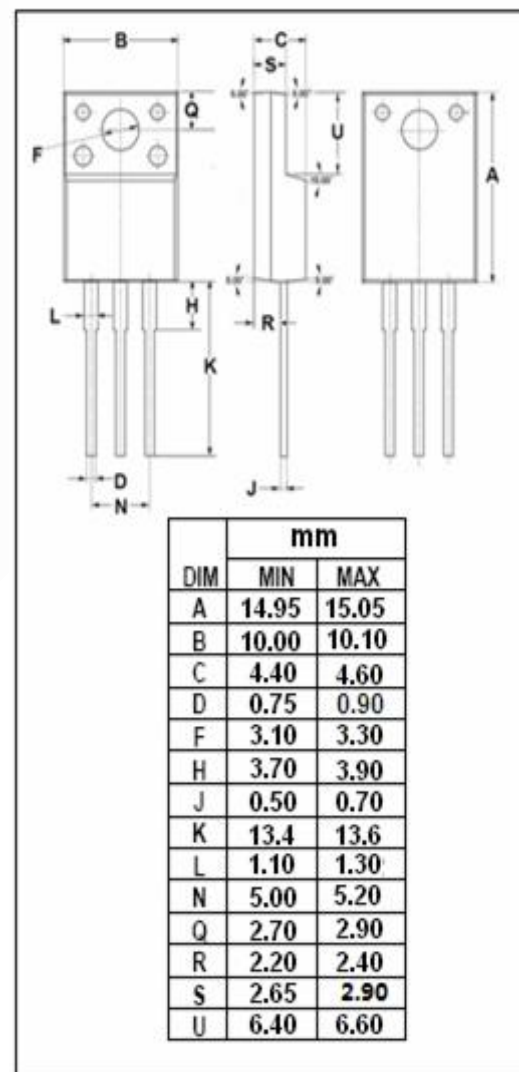
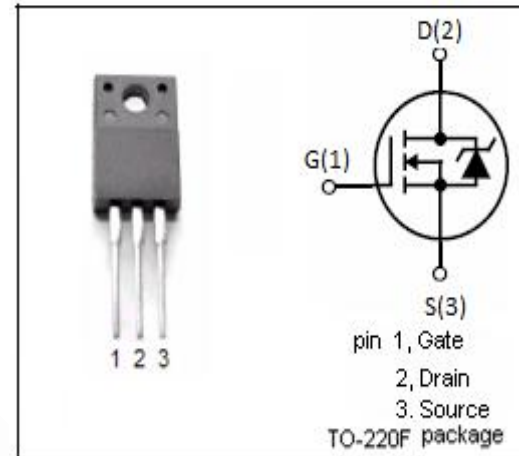
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	600	V
V _{GSS}	Gate-Source Voltage	±30	V
I _D	Drain Current-Continuous @T _c =25°C (V _{GS} at 10V) T _c =100°C	21 13	A
I _{DM}	Drain Current-Single Pulsed	61	A
P _D	Total Dissipation @T _c =25°C	34	W
T _j	Max. Operating Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(ch-c)}	Channel-to-case thermal resistance	3.65	°C/W
R _{th(ch-a)}	Channel-to-ambient thermal resistance	80	°C/W



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IPA60R125CP

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	$V_{DS}=V_{GS}; I_D=0.79mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=12A$		150	165	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}= \pm 20V; V_{DS}= 0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}= 600V; V_{GS}= 0V; T_j=25^{\circ}\text{C}$ $V_{DS}= 600V; V_{GS}= 0V; T_j=150^{\circ}\text{C}$			1 250	μA
V_{SDF}	Diode forward voltage	$I_{SD}=12A, V_{GS}= 0V$		0.9	1.2	V