

isc N-Channel MOSFET Transistor

IPA60R199CP, IIPA60R199CP

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 0.199\Omega$
- High peak current capability
- Enhancement mode
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

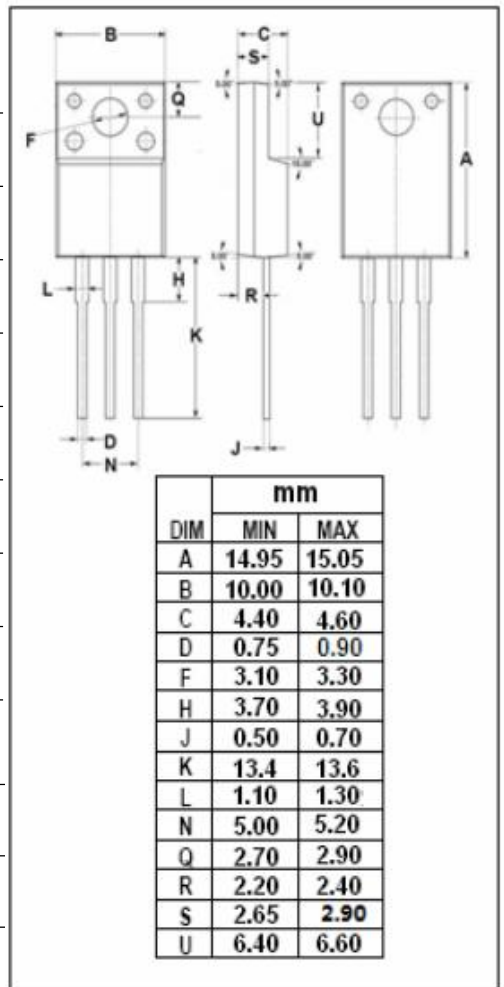
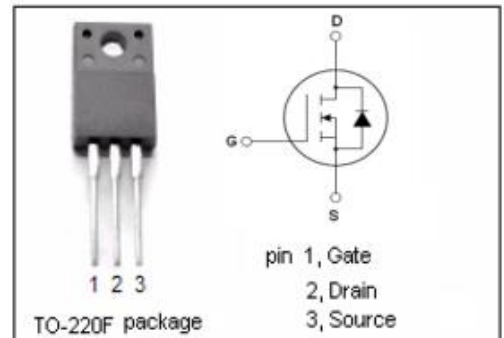
- Hard switching SMPS topologies

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	16	A
I_{DM}	Drain Current-Single Pulsed	51	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	34	W
T_j	Max. Operating Junction Temperature	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	3.7	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	80	$^\circ\text{C/W}$



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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D = 250\ \mu A$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$; $I_D=0.66mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$; $I_D=9.9A$			0.199	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=20V$; $V_{DS}=0V$			100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600V$; $V_{GS}=0V$			1	μA
		$V_{DS}=600V$; $V_{GS}=0V$; $T_J=150^{\circ}\text{C}$		10		μA
V_{SD}	Diode forward voltage	$I_F=9.9A$; $V_{GS}=0V$			1.2	V

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