

isc N-Channel MOSFET Transistor
IXTP12N50PM
• FEATURES

- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Static drain-source on-resistance
: $R_{DS(on)} \leq 500m\Omega @ V_{GS}=10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

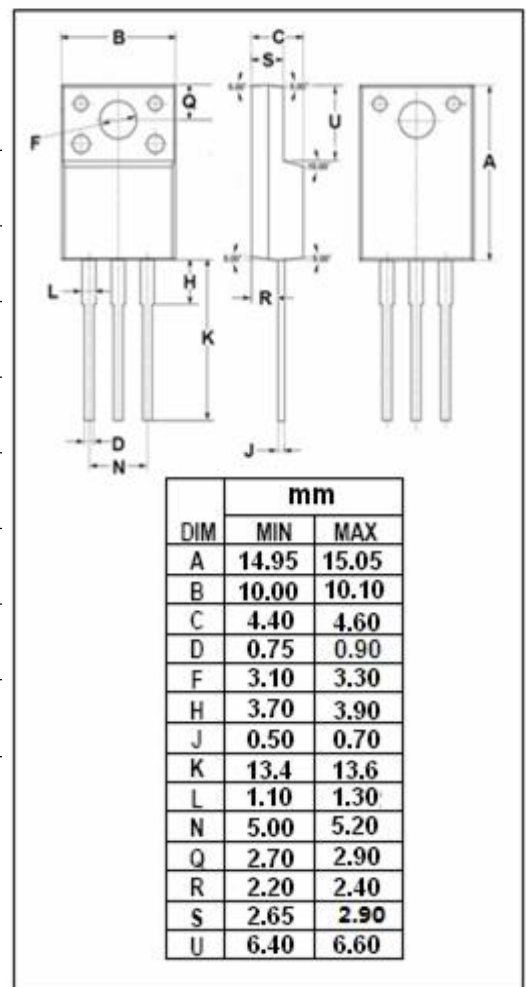
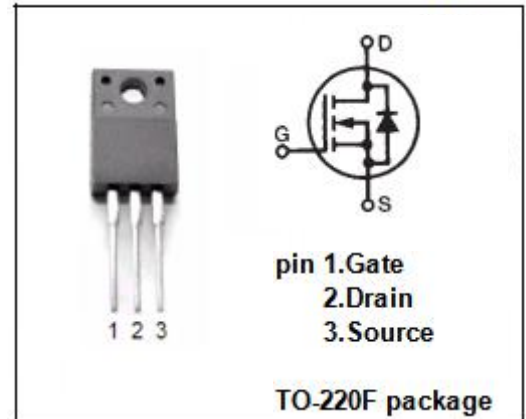
- DC/DC Converter
- Ideal for high-frequency switching and synchronous rectification

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	6	A
I_{DM}	Drain Current-Single Pulsed	30	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	50	W
T_j	Operating Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Junction-to-case thermal resistance	2.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =250 μ A	500		V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =250 μ A	3	5.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D = 6A		500	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} =0V		±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 500V; V _{GS} = 0V		5	μ A
		V _{DS} = 500V; V _{GS} = 0V; T _J =125°C		250	
V _{SD}	Diode forward voltage	I _F = 12A; V _{GS} = 0V		1.5	V

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